



RailRider Pro™

September 2015

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Equipment

Introduction to the Equipment

Purpose of the Equipment

The MiTek RailRider Pro™ Floor Truss Roller System is designed for the fast, accurate and economical production of wood floor trusses.

Overview of the Equipment

The RailRider Pro™ Floor Truss Roller System fabricates wooden trusses with a two-stage connector plate embedment process. In the first stage, a truss is built on the infeed side of the table, with connector plates placed on the top side of the truss. The traveling Floor Truss Roller head performs the initial plate embedment by seating the connector plates into the wood fiber on the top side. In the second stage, the wood truss is flipped over to lay on the outfeed side of the table with the existing connector plates on the bottom side of the truss. A new truss is built on the infeed side. The second pass of the roller embeds the second set of plates on first truss at the same time it embeds the first set of plates on the second truss.

The RailRider Pro™ floor truss roller press is a 24-inch diameter roller press with manual controls. The Floor Roller is equipped with steel wheels that roll on the outside of a steel table that includes the Jig Hardware on its surface.



Equipment

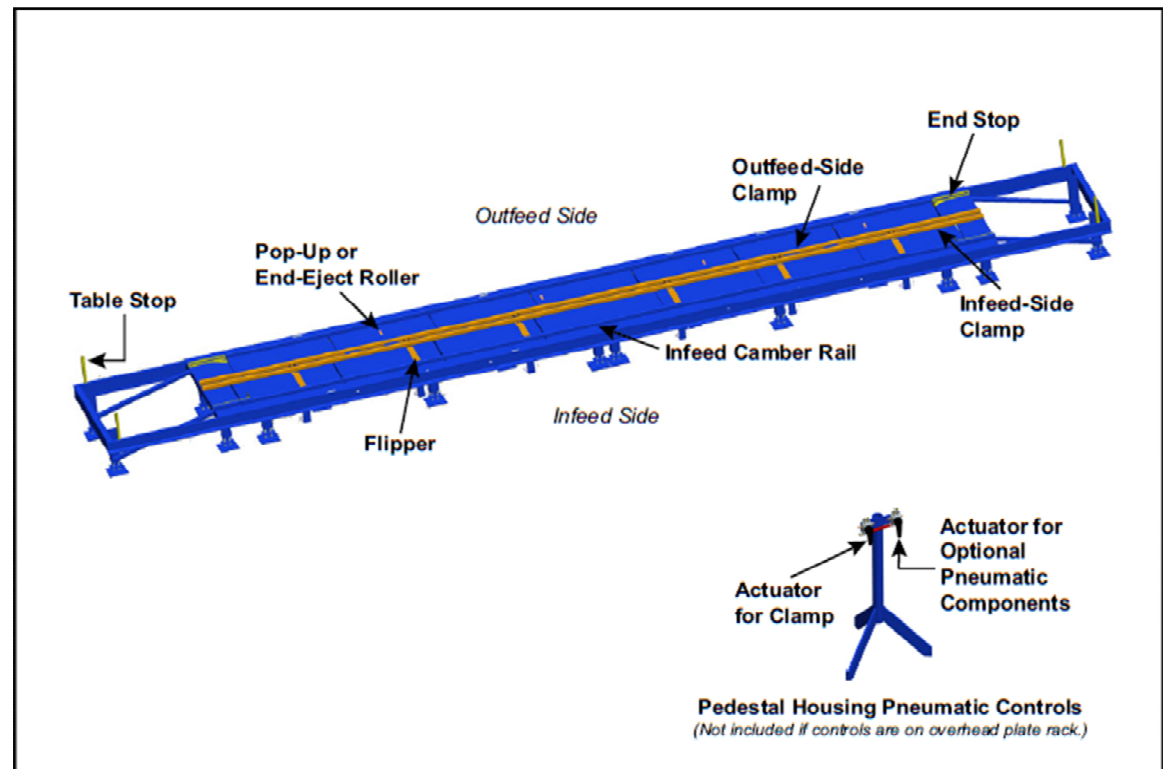
Introduction to the Equipment (cont)

Purpose of the Equipment

The primary function of the *RailRider Pro*™ floor truss roller press system is to completely embed connector plates into lumber to form strong connection points for floor trusses.

Overview of the Equipment

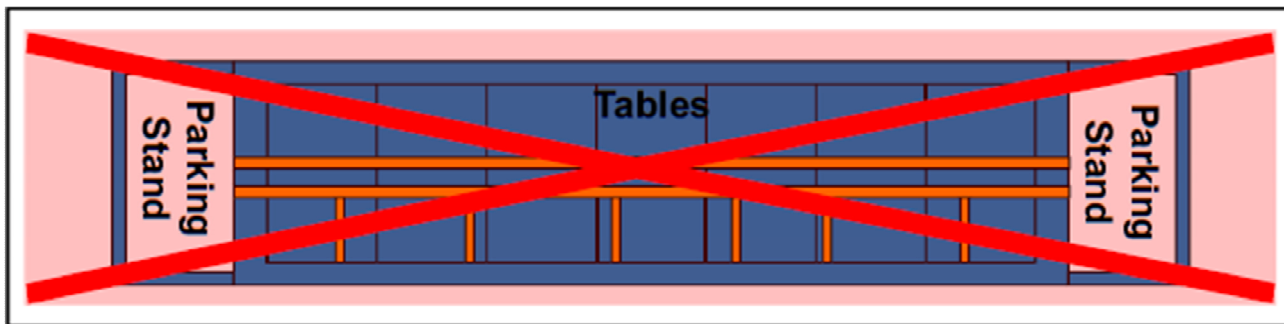
An entire system consists of a gantry head, which houses the roller that causes the embedment of the connector plates, a set of tables that holds and supports the truss and gantry head, and two (2) parking stands that support the gantry head while not in use. The main components are labeled and shown here.



Equipment

Restricted Zones

All personnel must stay clear of the restricted zone when the equipment is in use. The operator shall check for personnel, equipment, and barriers within the restricted zone before starting the machine. The restricted zone is the red area shown in this graphic.



Equipment

Safety

The MiTek Floor Truss Roller is equipped with Push Bars and emergency stop controls. The operator must become familiar with the location and operation of these devices.



Warning: Personal Injury Hazard

Never operate the RailRider Pro™ floor truss roller press without All guards in place and operational. Never disconnect or paint over warning note labels. If labels become deteriorated or damaged, request new ones through our Customer Service Department.

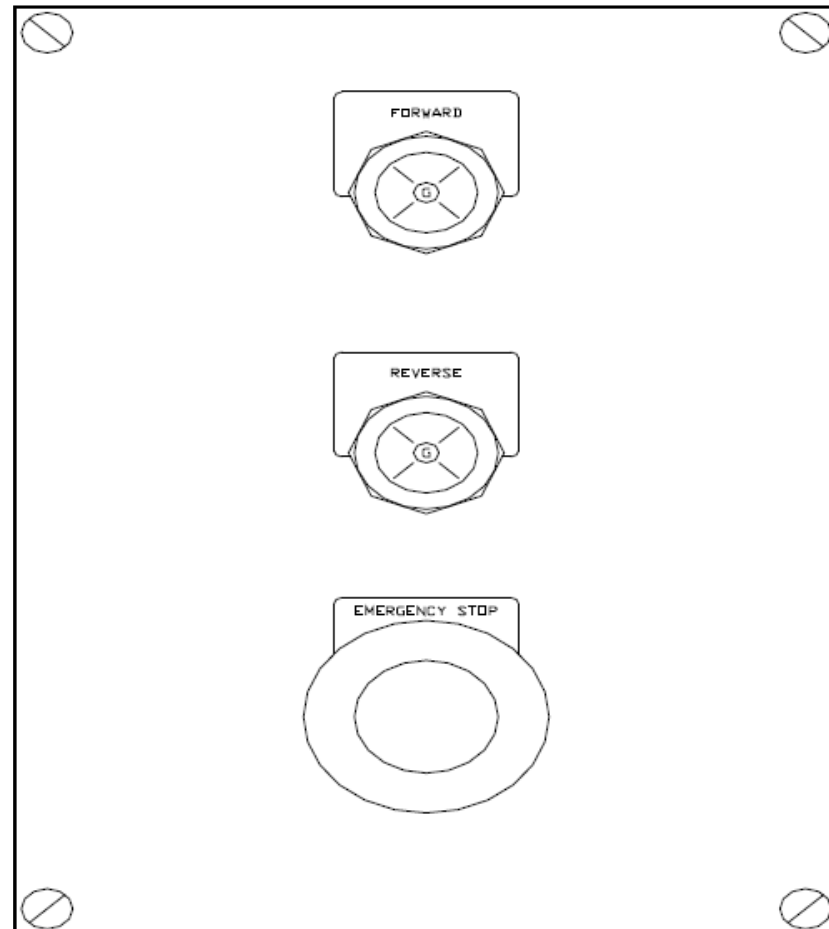
Equipment

Operating the Equipment



Each Floor Truss Roller Press has **FORWARD** and **REVERSE** push buttons located on the machine and two safety bars.

- A. Turn on the disconnect.
- B. Press and hold the **FORWARD** or **REVERSE** pushbuttons to move RailRider Pro™ floor truss roller press in the required direction to press connector plates into the truss.



Equipment

Operating the Equipment (cont)

A. Turn on the disconnect.

B. Press and hold the **FORWARD** or **REVERSE** pushbuttons to move +RailRider Pro™ floor truss roller press +in the required direction to press connector plates into the truss.



WARNING

The operator must be in a location where all moving components are clearly visible, and must not start any sequence until all personnel are clearly out of any area where contact with moving parts is possible.



When an **EMERGENCY STOP** is pressed, it will stop all motion by removing power to the motor. This is accomplished by disengaging the master control relay.

Operation

Setting Up

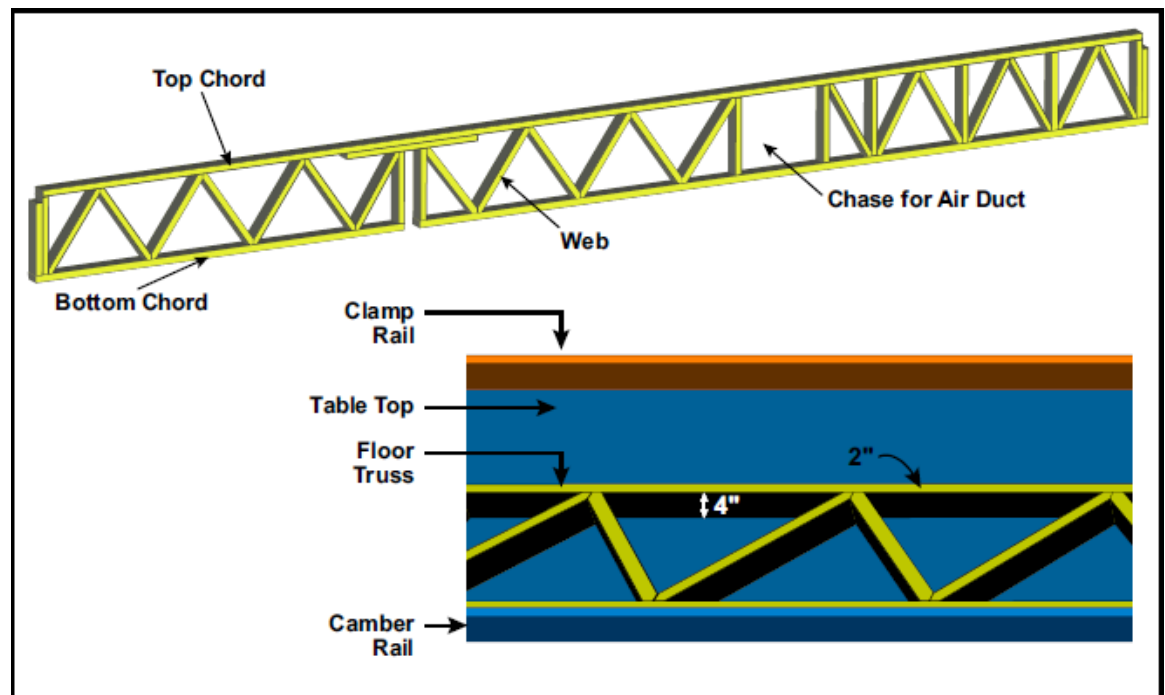
Setting Up for Operation

This training material does not address the methods for building a truss. There are many other resources through MiTek and the components industry that address the proper way to build floor trusses. The information here describes how to operate the jiggging and how the tables were designed to be used.

Laying Out the Truss

Lay the truss out on the tables as specified by your engineering drawings. The bottom chord must rest against the camber tube. The top chord will be contacted by the side clamp once it retracts.

1. Place the lumber as shown here, building up from the bottom chord.
2. Place connector plates only on the side facing up.
3. Hold the connector plates in place by securing one corner of each plate with one strike of a hammer.



Operation

Setting Up (cont)

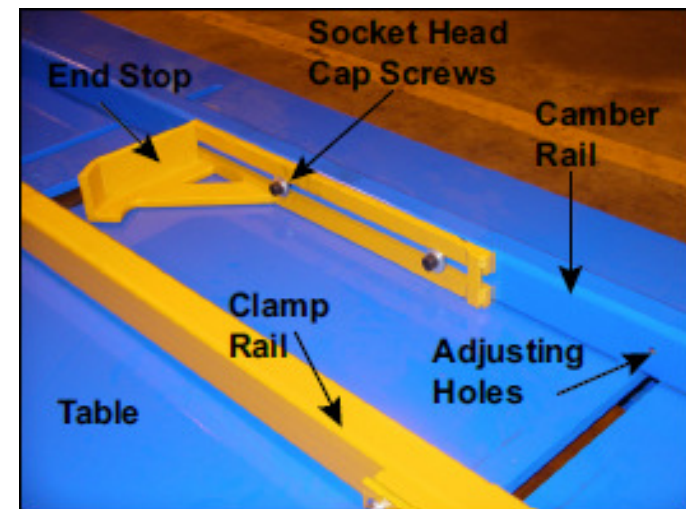
Using the Jigging

Use the adjustable end stops that came with your table system when setting up a truss. Place one end stop at each end of each truss on the table.

Placing and Adjusting the End Stops

To secure the end stops in place, refer to the image shown here while completing these steps.

1. Place an end stop on the table with the bottom of the "L" facing the end of the truss to be fabricated.
2. Align the end stop so the closest adjusting holes in the camber rail show through the end stop's slot.
3. Insert two (2) securing bolts through the slot in the end stop and thread them into the adjusting holes.
4. Before the bolts are completely tightened, slide the end stop to the exact location required.
5. When the proper length is achieved, tighten the securing bolts with a 3/8-in. allen wrench.



Accounting for Uneven Top and Bottom Chord Lengths

If the top chord and the bottom chord are different lengths, use a wooden block to compensate for the difference. Place the block against the end stop in place of the chord, and then place the chord to be fabricated against the block. This will create a structurally sound chord offset.

Operation

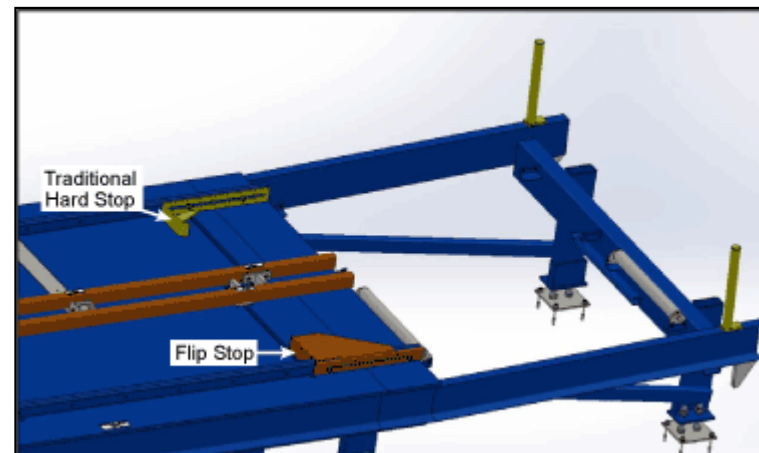
Setting Up (cont)

The Flip Stop for End-Eject RailRider

If you own or use a *RailRider™* or *RailRider Pro™* floor truss press with the end-eject option, MiTek now offers a flip stop to guide the first vertical member on the ejection end of the truss. Until now, only a hard stop was available which requires bolting and unbolting to slide the truss through. With the flip stop, just flip over the hinged assembly and slide the truss right past it. Flip it back, and continue building. It now takes a few seconds to do what used to take several minutes.

The new flip stop is shown in orange on the *RailRider Pro* table below. The traditional hard stop that was previously used is shown in yellow, and will continue to be used where the truss does not need to slide past it.

NOTE: The new flip stop can be installed quickly and easily, using the same holes in the frame that are used for the traditional hard stop. It's a quick and easy replacement that will save you time and frustration.



Operation

Pneumatic System

Operating Overview

1. Set up the truss as described in the *Setting Up* section.
2. After all connector plates are in place on the applicable side, check the following:
 - All personnel, tools, and equipment are at a safe distance from the equipment.
 - All flippers, pop-ups, and end-eject rollers are retracted to their down position (if your system has these options).
3. Extend (close) the clamp rail by turning the control valve labeled *Clamp* to its closed position. See the image shown here.
4. Follow the manufacturer's instructions for operating your particular gantry head to embed the plates with the gantry roller.
5. Park the gantry head on a parking stand.
6. Retract (open) the side clamp by turning the control valve labeled *Clamp* to its open position.

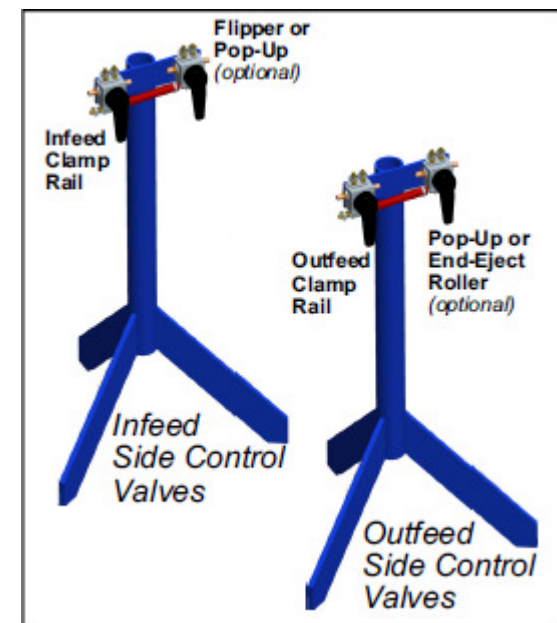
NOTICE

COLLISION HAZARD.

Before extending clamp rail:
Retract flippers and end-eject rollers.

Before moving gantry head:
Retract flippers.

Before raising flippers or end-eject rollers:
Retract clamp rail and ensure gantry head is parked on a parking stand.



Operation

Pneumatic System (cont)

Operating Overview

7. Place the truss on the outfeed side of the table.

a) If your system does NOT have pneumatic components on the infeed side, pick the truss up, turn it over, and place it plate-side down on the outfeed side.

b) If your system has pop-ups on the infeed side:

1) Raise the pop-ups on the infeed side by turning the control valve labeled *Pop-Up* to its up position.

2) Pick the truss up, turn it over, and place it plate-side down on the outfeed side of the table.

3) Lower the pop-ups by turning the control valve labeled *Pop-Ups* back to its down position.

c) If your system has flippers on the infeed side:

1) Make certain that the outfeed side is clear of material and personnel, the gantry head is parked clear of all flippers, and the clamp rail is retracted.

2) Extend the flippers on the infeed side by turning the control valve labeled *Flipper* to its up position. *The flippers will raise and turn the truss over so it falls plate-side down on the outfeed side of the table.*

3) Lower the flippers by turning the control valve labeled *Flipper* back to its down position.

Operation

Pneumatic System (cont)

Operating Overview

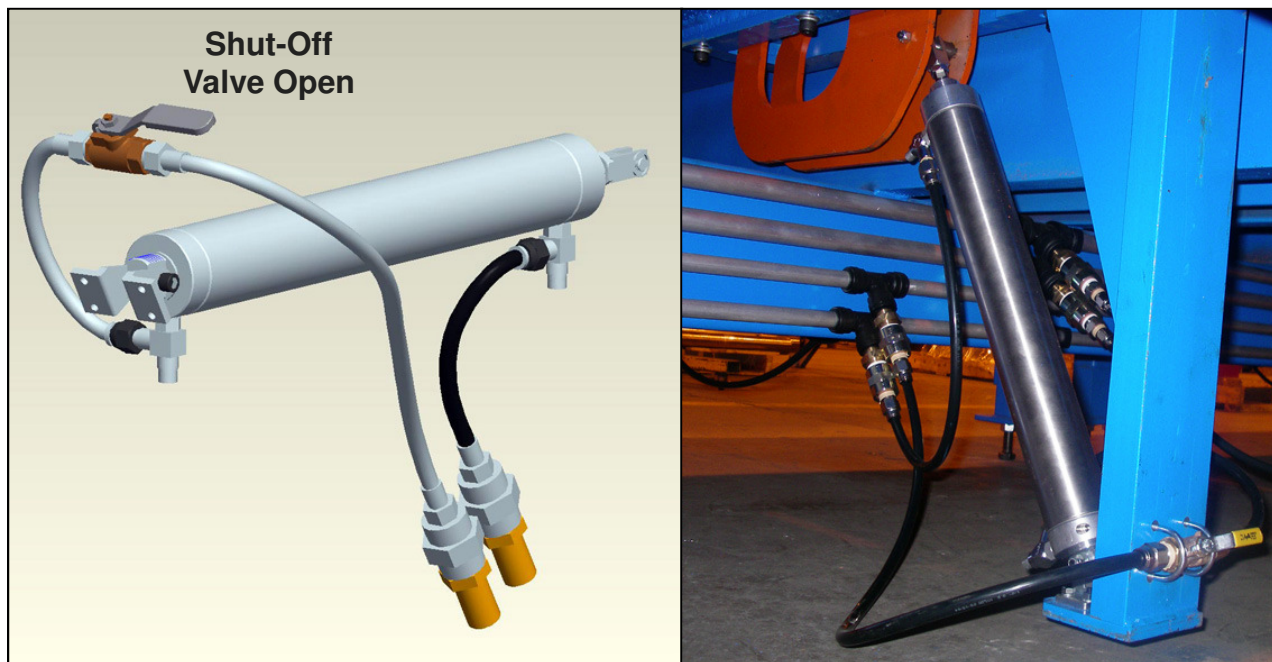
8. Place the connector plates in place on the second side of the truss.
 9. Repeat step 2 through step 6.
 10. Remove the truss from the table.
 - a) If your system does not have pneumatic components on the outfeed side, pick the truss up and remove it from the table.
 - b) If your system has pop-ups or end-eject rollers on the outfeed side:
 - 1) Make certain that the clamp rail is retracted (open).
 - 2) Raise the pop-ups or end-eject rollers on the outfeed side by turning the control valve labeled *Pop-Up* to its up position.
 - 3) Slide the truss off the tables.
- NOTE:** If your system is end-eject, the gantry head must be parked completely on a parking stand for the truss to slide under the roller and exit the tables.
- 4) Lower the pop-ups or end-eject rollers by turning the control valve labeled *Pop-Ups* back to its down position.

Operation

Shut-Off Valve

Deactivating Individual Pneumatic Components

Each flipper has a shut-off valve that removes it from the setup. When the shut-off valve is closed, the flipper does not receive pneumatic pressure. It remains still when the pneumatic options handle is actuated and the other flippers extend. This image shows a shut-off valve in its open position. Turn the handle 90 degrees to close the shut-off valve. The pop-ups and end-eject rollers do not have a shut off valve.



Operation

Control Valves

Understanding the Valve Bank

The valve bank directs compressed air to the clamp rails and flippers. The control valve for the clamp rail and flippers (located on the pedestal or overhead plate rack) is actually a pilot valve that actuates the valves in this valve bank. A more detailed graphic and explanation can be found in the *Pneumatic System* section of the *Equipment Manual*.

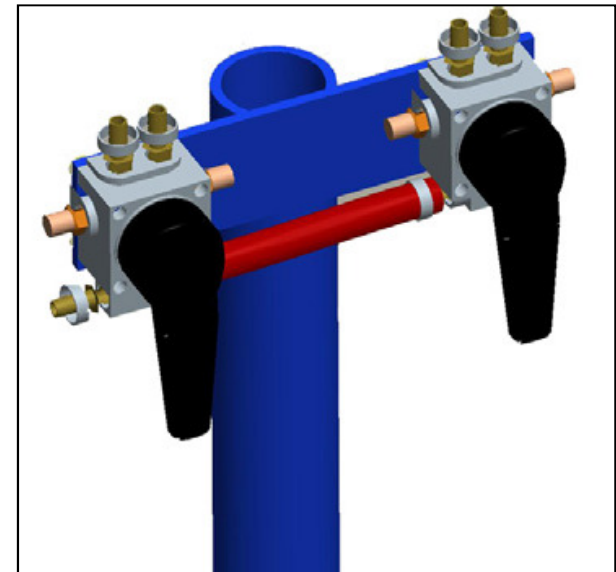
Understanding the Control Valves

The control valves control all of the pneumatic functions of your system. All systems have control valves for both clamp rails. Additional control valves are required for the optional flippers, pop-ups, and end-eject rollers. The control valves are located either on pedestals or on the optional overhead plate rack. The infeed and outfeed sides of the table are controlled by separate control valves. For the clamp rail and flippers, the applicable control valve actuates the valves on the valve bank to extend or retract the clamp rail or flippers. For pop-ups and end-eject rollers, the control valve directly actuates the pop-up or end-eject roller cylinders.

Operating the Control Valve

The control valves are three-position valves. The center position is neutral. It is not necessary to use the neutral position. It is acceptable to leave the valve in the down or open position when the pneumatic components are not in use.

Control Valves on Pedestal



Quiz 1

1. The RailRider Pro Floor Truss System fabricates trusses using how many stages?
 - a) One stage
 - b) Two stages**
 - c) Three stages
 - d) Four stages

2. *RailRider Pro™* floor truss roller press system completely imbeds the connector plates and does not require a finish roller press?
 - a) T**
 - b) F

3. Flip stops can be installed quickly and easily, using the same holes in the frame that are used for the traditional hard stop?
 - a) T**
 - b) F

4. If your system is end-eject, the gantry head can be parked anywhere when ejecting a completed truss?
 - a) T
 - b) F**

5. Control valves have how many positions?
 - a) One-position
 - b) Two-positions
 - c) Three-positions**
 - d) Four-positions