

MangoTech

FRESH AUTOMATED SOLUTIONS

New Installation Preparation

This document is provided to aid in the installation of Mango automated truss and wall systems. It is intended to inform you of what to prepare, what to expect, and to cover commonly asked installation questions. Please review the following to ensure the installation process goes smoothly and you receive the best possible training.

Site Preparation: Please ensure that the area where the Mango system is to be installed is free of any other equipment or other debris.

Electrical: Please ensure that the electrical supply is behind where the saw is to be located. The Apollo saw comes with a starter but does not have lock-out capabilities. You will need to connect the high voltage (3 phase power) to the starter.

A standard A/C single phase 115v circuit is required to power the computer. Please ensure an outlet is located near the installation site of the saw.

Computer Network: The Mango system is fully capable of being networked but Mangotech will not connect any network cables or configure any network settings. If you wish to have the system on the network, please locate a network plug just behind where the saw is to be located.

Cutting Files: Please create several data files and email to Mango several weeks before the scheduled installation date. This will ensure a timely install and maximize training time. Email to Richard@mangotech.com and cullen@mangotech.com

File Types:

Truss systems use *.trs, *.omn, *.saw, *.cut, *.ezy, *.cyb or *.mwf files

Wall systems use *.xml, *.mwf or *.tx files

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Pre-Assembly: Please do not bolt down conveyors or the saw. This needs to be done by a Mango installer to ensure proper alignment. If you need to set the saw in place to check measurements and placement, that is fine.

Unpacking: Please do not unpack any of the automation system. You can remove the items from the crate in order to move the saw if needed. This will ensure that no parts are missing during the installation.

Electrical Precautions: Mangotech recommends the customer installs a battery back-up on the system. The minimum requirements are a 350va, such as the APC 350VA/200 Watt UPS. This will help in preventing failures caused by electrical supply interruptions or electrical storms (lightning). The 1 year warranty coverage is for manufacture defects and does not cover acts of God or electrical supply interruptions.

Mounting Surface: Mangotech does not recommend installation on asphalt. If your location is paved with asphalt, the recommendation is to saw cut small areas and pour concrete pads for the saw and conveyor legs to be secured. Please contact Mango if you need any assistance or layout dimensions.

Installation Schedule: The system installation time is 2.5 days.

Day 1 – assembly of saw

Day 2 – Training of operators

Day 3 – Follow up

***Delays caused by electrical, file generation, or other reasons not caused by Mangotech could result in additional installation charges.**

Tools Required

1/2" and 9/16" Socket

Metric Alan keys

Number 1 and 2 Phillips

Pliers

Multi meter

Adjustable Wrench

Small Flat Head Screw Driver

Side Cutters

Multi Grips

3/8 Masonry Bit and Hammer Drill

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Assembly Instructions for Length Stop

Before constructing the length stop, ensure correct and smooth operation of the conveyors which will be holding the length stop. They must be correctly lined up to the saw fence. To do this, line up the fence with the top roll in the fold of the c-channel that makes up the side of the conveyor (Fig 1), then string line the fence all the way to the furthest point of the conveyor. Fix conveyors before constructing the length stop.

Fig 1.

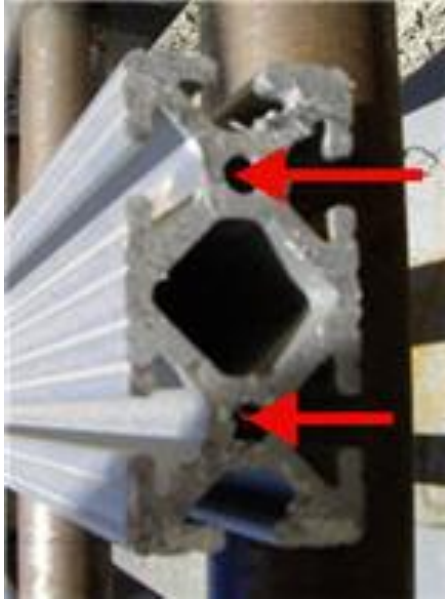


1. Lay the two pieces of 10' aluminum extrusion on the conveyors end to end, then take the 1/8 steel braded cable out of the kit and measure it against the two pieces of extrusion, it should be approx 3" longer than the total length of the two pieces of extrusion. If not then either the rail or the cable may need to be cut.
2. Flare drill the four holes that face each other between the two pieces of extrusion, then tap 8mm the two holes in the end of the extrusion closest to the saw.(Fig 2)

Fig 2.

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3. Insert pairs of the single track nuts into the extrusion (fig 3) enough for one pair every 3' then closest to the join insert two double track nuts in each extrusion.

Fig 3.



3. Insert dowel pins into flare drilled holes and push extrusion together, use double track nuts and splicer plate to lock the two pieces together, use a straight edge to ensure the two sections are in line.
4. Join cable to white belt using two pieces in fig 4 , and drilling through the belt.

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Fig 4.



5. Thread cable through centre hole in extrusion, then thread idler pulley bracket over cable and bolt onto saw end of extrusion using pre-said 8mm tapped holes. Insert idler pulley in to bracket then insert shaft through pulley securing with c clips. (Fig 5)

Fig 5.



6. Place idler pulley cover on and secure with m4 screw.
7. Take slider guide and slide onto far end of extrusion noting that the extended side is the top front of the extrusion (the track nuts and splicer are the back).

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8. Slide the motor mount assembly onto the far end of the extrusion. Pull braided cable through and join to front of slider guide. Wrap white belt around pulley on motor mount assembly .NOTE PLACE SMALL BLACK BELT XL200 IN POSITION BEHIND WHITE BELT BEFORE ATTACHING TO SLIDER GUIDE. Attach belt to slider guide pull firm and tighten. (Fig 6)

Fig 6.



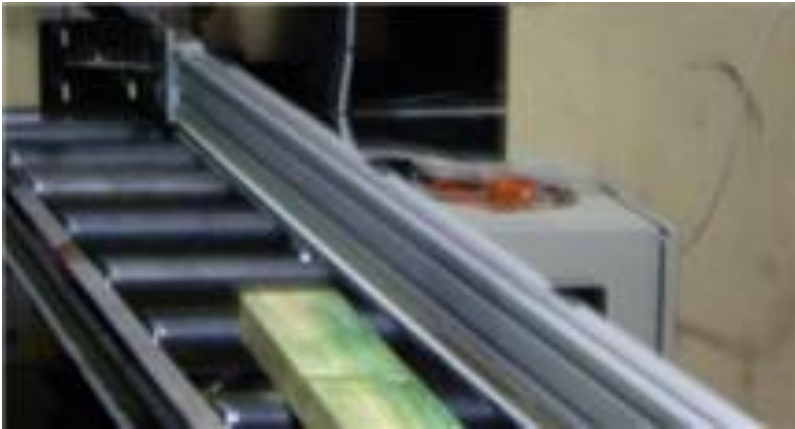
9. Attach brackets to back of extrusion using single track nuts already inserted. Attach secondary brackets to the conveyor roughly 3' apart, stand length stop on approx 1 ¼ " blocks with the idler pulley as close to the saw fence as possible, then fix the two brackets together.

10. Straighten lengthstop in line with fence, tighten all bolts then remove blocks, fit the motor, conduit and striker plate. Thread the wiring through the conduit and connect to motor and amp.



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Assembly Procedure for Touch Screen Installation & Upgrade

1. Unplug all old wiring and remove old computer cabinet.
2. Remove old length cabling from conduit discard old encoder cable (Cat 5) and replace with new grey encoder cable.
3. Replace old angle encoder cable with new encoder cable.
4. Disconnect old grey power cables from black e-stop button and remove black button and mount from saw (This will no longer be used).
5. Cut old 2 pin white plug off grey length power cable and fit new black 2 pin power plug to cable.(L=Brown, N=Blue) Make a short power cable to run from the cabinet to the angle power cable using cable and fittings provided.
6. Place new cabinet roughly 3” from side of saw running parallel with saw to allow easy access for door, the pole for the touch screen should be about 1”back from the conduit, bolt down.
7. Place 1 ½ “ conduit over cables in touch screen and secure the gland, poke cables through the gland in cabinet and slide touch screen onto pole, secure conduit in gland. Position screen and use 10mm bolt to hold in pos.
8. Connect 2 X USB, VGA (blue screen cable), 1 X power cable (this plugs in at the bottom of the large panduit on the right) and the E-stop cable(this is red, black and green, the red and black go in to the terminals marked e-stop, the green goes to the ground terminal next to them).
9. To connect the stroke switch, if long enough use the existing cable (two pin with back tape), cut the end off and feed through gland where new black and red cable protrudes from cabinet (this cable will be removed) and terminate old cable. Place all panduit lids on. Connect length and angle power and encoder cables to cabinet.
10. Attach paper tray using bolts provided.
11. Connect power cables to motors and remove old encoder cover (aluminum) and replace with new box steel covers.

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12. Tidy up cables using cable ties provided.

Software Setup

ADMINISTRATOR PASSCODE: 210569

1. Home servo's, take a test cut and measure, Enter this number in Commissioning/Configuration/"SawBlade to LengthStop" (double click and enter with the following format x-x-xx)
2. In Commissioning/Configuration/Axis1/"Calfigure" set to 55.98
3. In Commissioning/Configuration/Axis1/"Direction" enter if the length stop is on the left.
4. In Commissioning/Configuration/Axis1/"Maximum" set to 18-0-0.
5. In Commissioning/Configuration/"Block Length" set to 4-0-0.
6. Click Save Settings
7. In Commissioning/Calibration highlight "SawAngle" the click "Calibrate" and follow directions. Once complete you can use the "Test Function" to test accuracy.
8. In Commissioning/Calibration highlight "Center Point Offset" the click "Calibrate" and follow directions. Remember the measurements you put in are in 32nds.
9. Click Operation/Diagnostics/"yes" and follow directions, then click "Exit"
10. Click Operation/Manual Data/Complex Member. Enter length over 5-0-0 Enter 90 on one end and a 15 on the other. Click "accept". Click "Cut Member". In the likely event the cut is off, make adjustments from the Calibration/Centrepoint offset/CPO Plot. Manually enter 0-0-4 in CP to Length Adj. Click "Save Settings". Repeat this step until the machine cuts properly. Trial and error will get this measurement right.
11. Click Administration/Program Setting/Manual Directories/ Double Click "MD1" this is where you will chose where you are loading files from, the customer may

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have to network their computer first and map a drive to their server, or share a folder on our hard drive for them to dump jobs in to.

12. Click Operation/Home Servo follow directions
13. Click Operation/Diagnostics follow directions
14. Click Operation/Data File Loading, load a job
15. Cut a job!