How to Attach Butler Robotics to a Nolting (Hinterberg Stretch)

In order to accommodate all machine types we use universal parts bags, not all parts will be used in every installation.

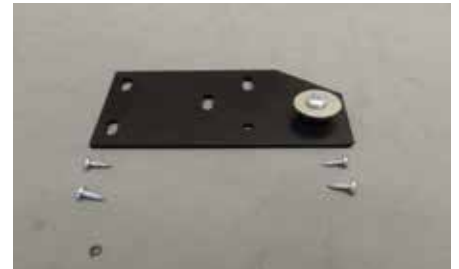| Bag #	Contents	Picture
Cables	Vary by machine	
X1	1-White belt (12') 4 - Plastic belt clamps 4 - Screw (4-40 x 0.5)	
Y1	1 - Black Belt (86") 4 - Plastic Belt Clamps 4 - Screw (4-40 x 0.5)	
Z2	5- Plastic Anchors 2- Screw (M5 x 12mm) 2- Washer (M5) 1- Stylus 5-Zip ties 1- Drill bit (5/16")	
Z3	1 - Motor Pulley Cover 2 - Nuts (M5 K-Lock)	

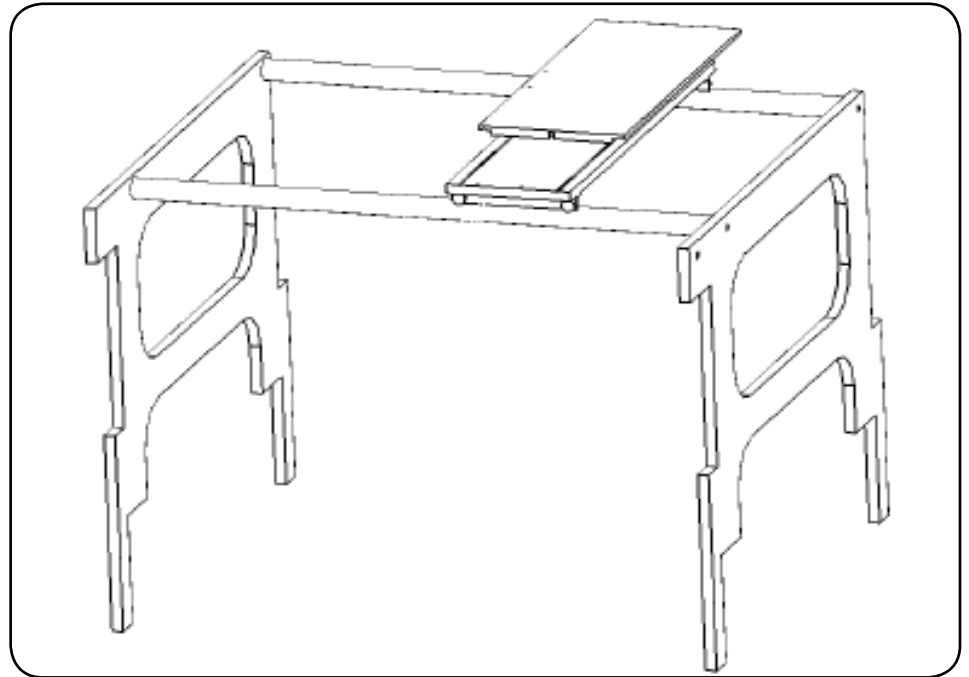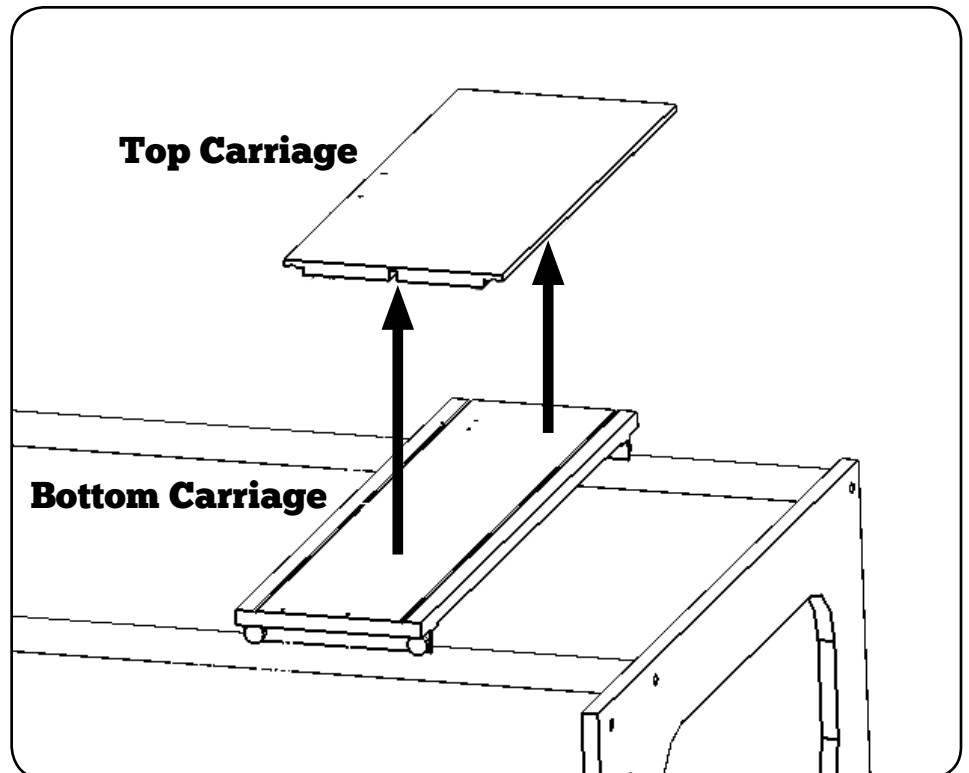| Bag #	Contents	Picture
D2	1- Display bracket 2- Screw (M3 x 8mm) 2-Remote base 4- Screw (M6 x 8) 4- Nut (M6) 2- Poly disc 2- Screw (M3 x 8mm)	
I3	1- Rear idler bracket 1- Rear idler clamp 4- Screw (#4 x 5/16") 1- Pulley assembly	
Y4	1-Carriage bracket 1- Universal Y-bracket 1- Thumb screw (#M5 x 6mm) 1- Eye bolt (M5 x 40) 2- Lock nut (M5) 2- Pan-head screw (#10-24 x 1")	
X12	2- Eye bolt (M5 x 40 10mm) 4- Lock nut (M5)	
M15	1- Motor box bracket 2- Screw (#10-24 x 1 1/2") 2- Lock nut (#10-24) 2- Screw (M5 x 12mm)	

Separate Carriages/Drill Templates

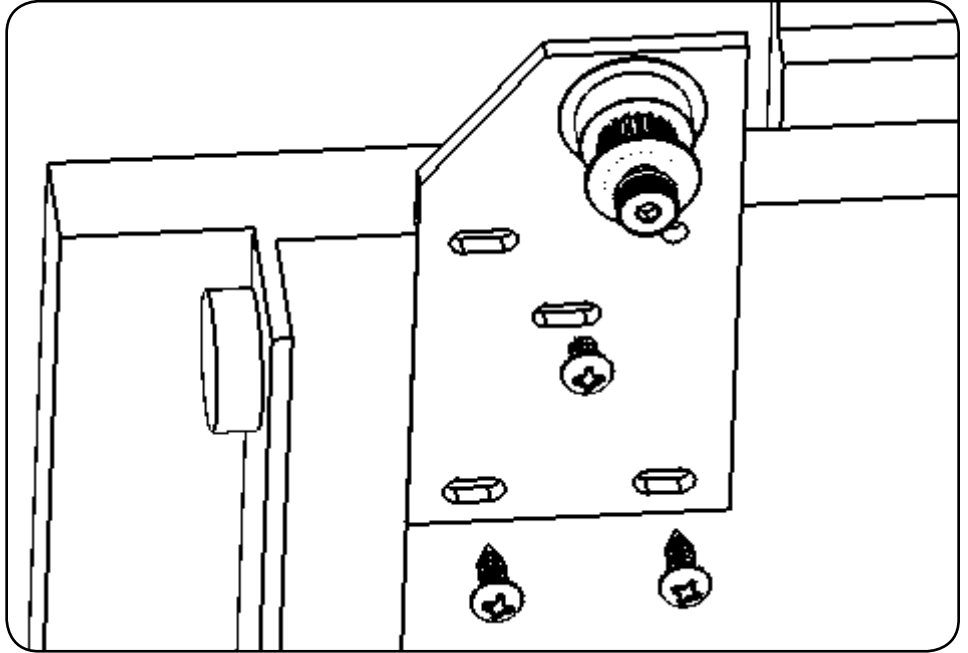**1** Remove the machine and separate the bottom and top carriages.

Top Carriage

2 Follow the instructions on the drill templates at the end of this guide to mark and drill the holes on the carriage.
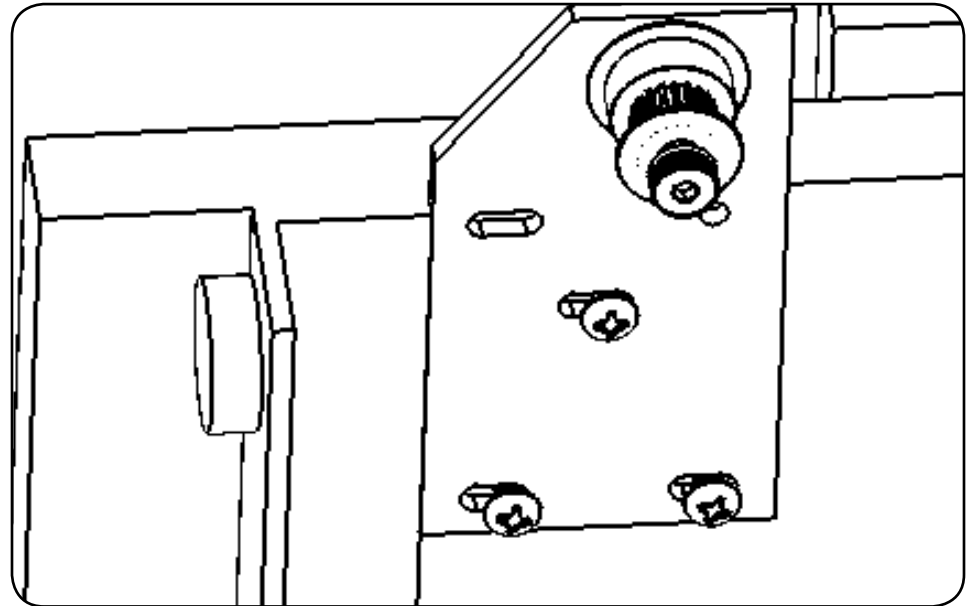—Motor Box
—Carriage Bracket

Bottom Carriage

Rear Idler Bracket (Bag I3)

1 Align the rear idler bracket with the rear axle of the lower carriage with the pulley hanging about an 1 1/2" from the side of the bottom carriage.
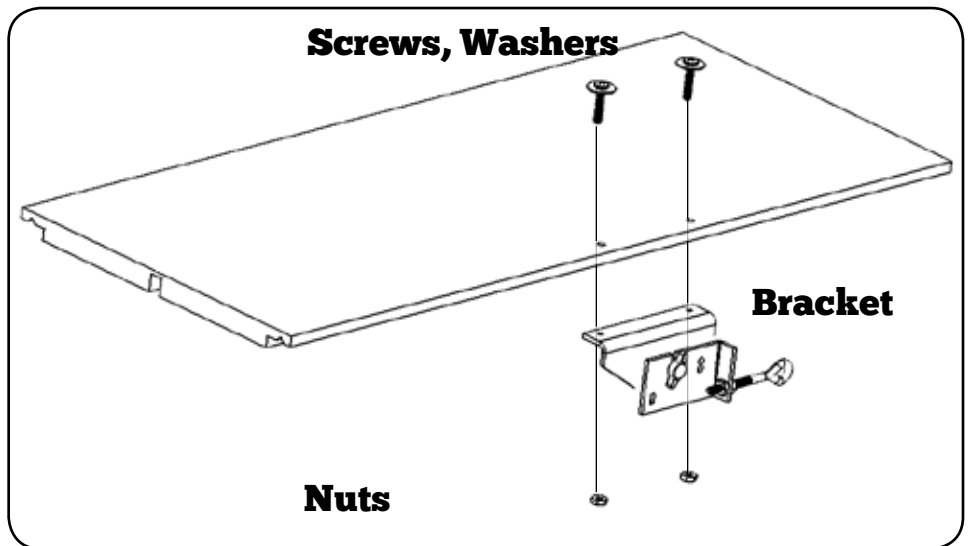

2 Use a drill or screwdriver to fasten the screws through the holes on the bracket into the carriage.

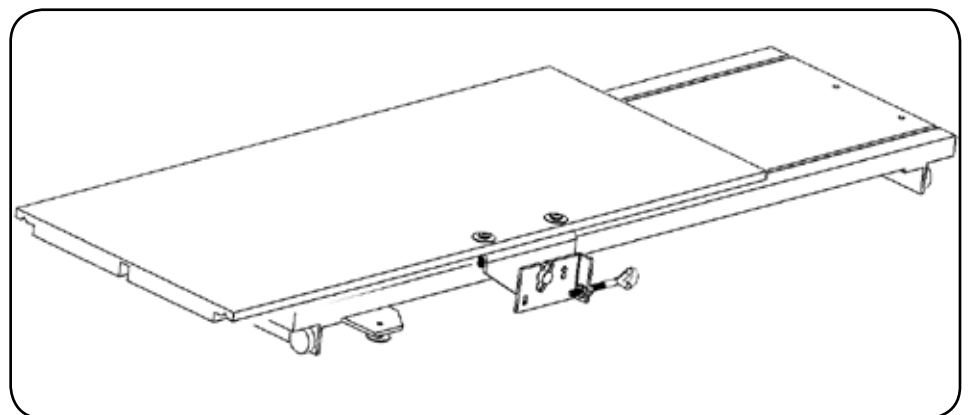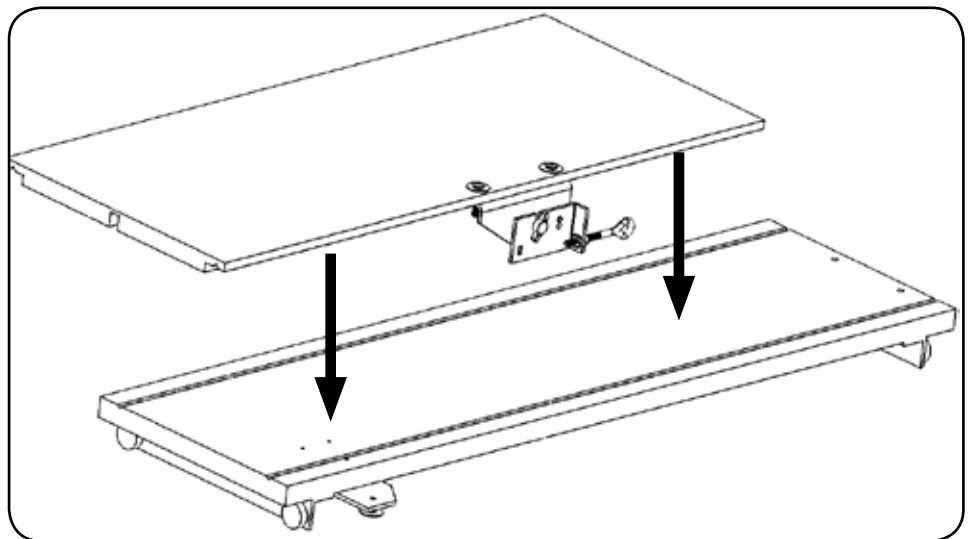Note: Use all four screws if possible, but all screws are not necessary.

Carriage Bracket (Bag Y4)

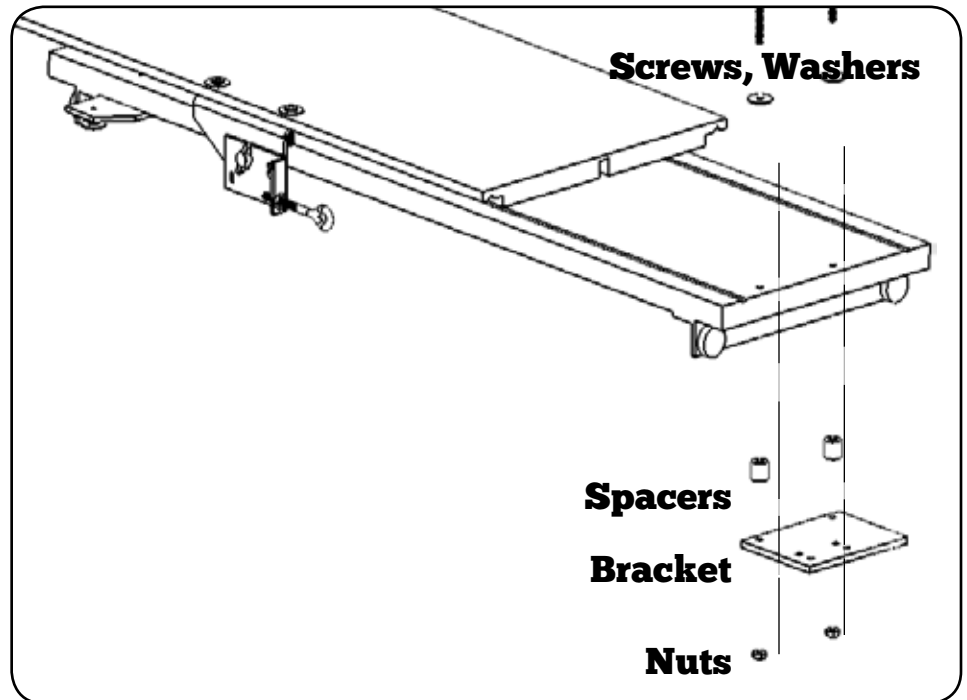**1**   Attach the black belt bracket to top carriage using the provided screws, washers, and nuts.

Screws, Washers

Bracket

Nuts

2   Replace the top carriage onto the bottom carriage.
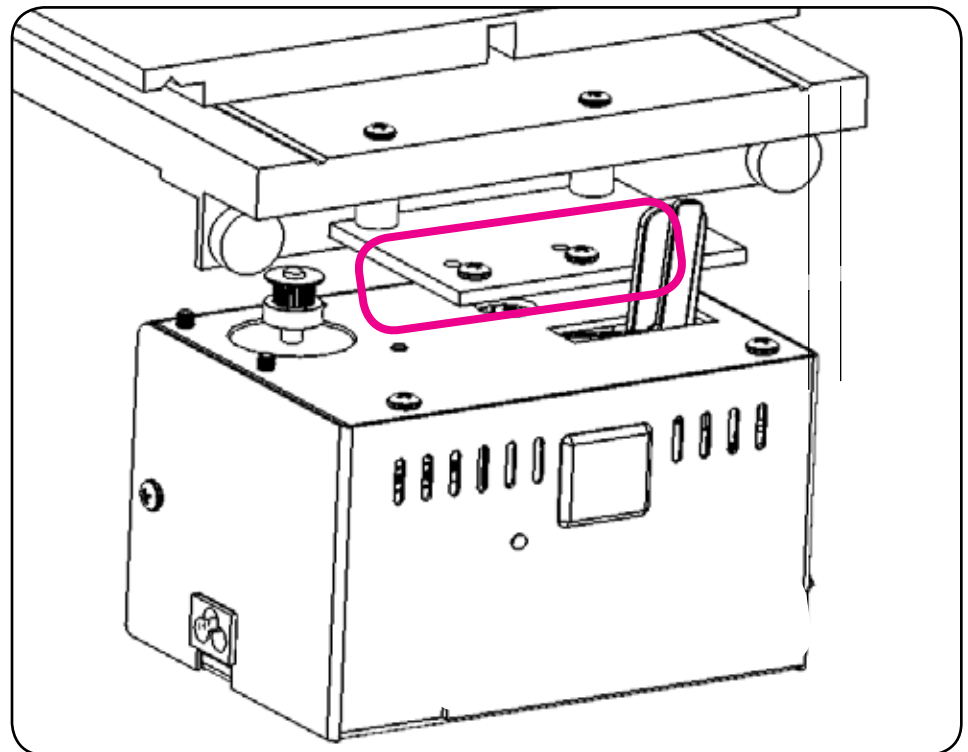
Motor Box and Bracket (Bag M15)

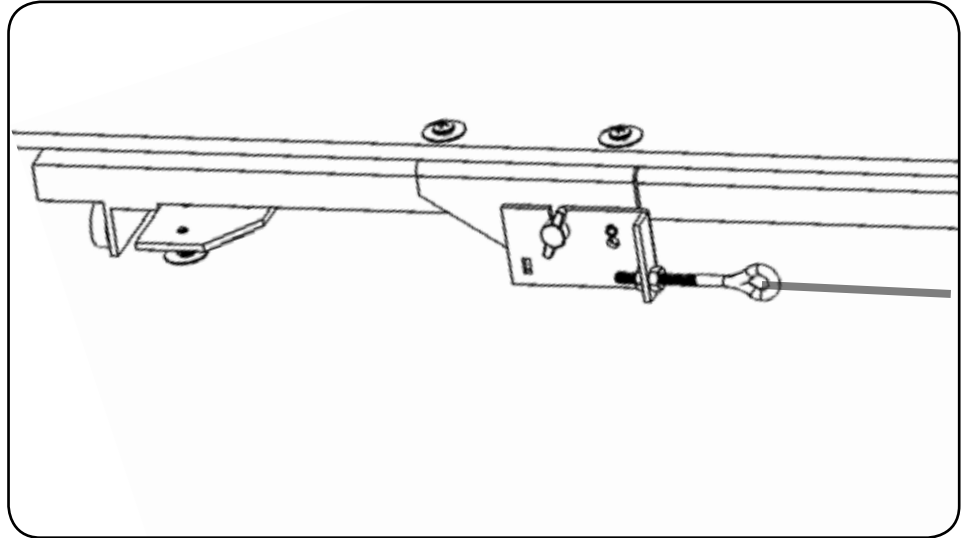**1** Attach the motor box bracket to front of carriage using screws, washers, spacers, and nuts.

Screws, Washers

Spacers

Bracket

Nuts

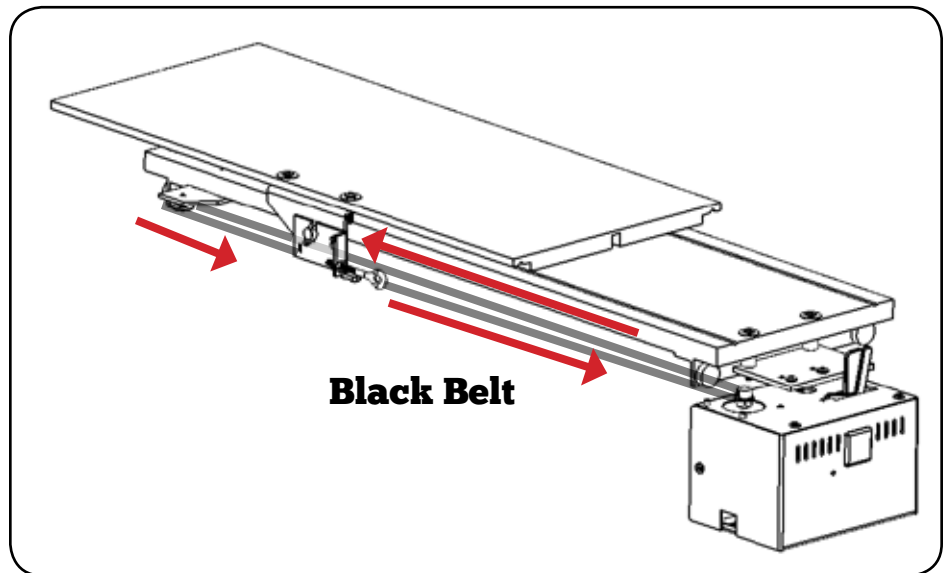**2** Attach the motor box to the motor box bracket using the two provide M5 x 12mm screws.

Black Belt (Bag X1)

1 Attach one end of the black belt to the eye-bolt on the carriage bracket using the belt clamps with the teeth facing the carriage.
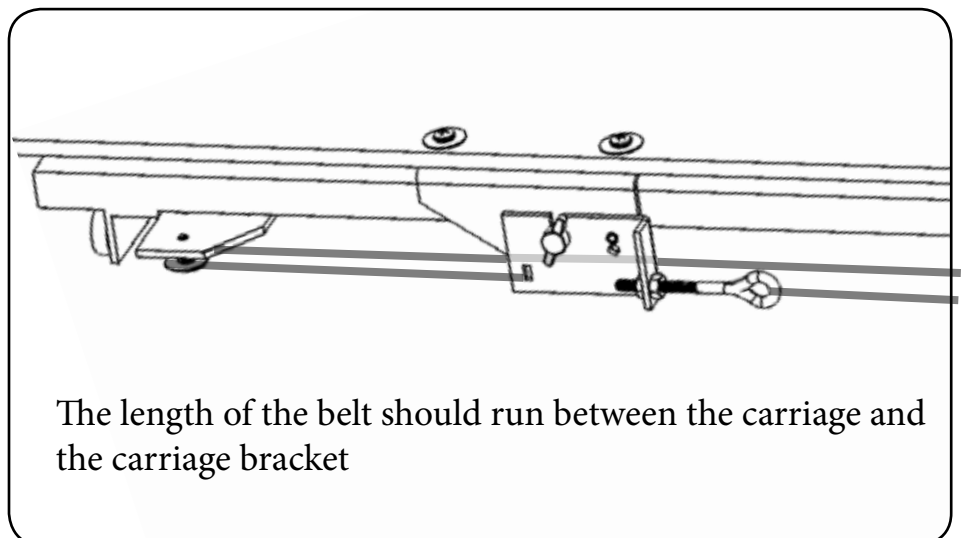
See Appendix A for help using belt clamps.

2 Run the belt around the pulley on the motor box then behind the carriage bracket and around the rear idler pulley.

Black Belt

3 Attach the other end of the black belt to the slot on the carriage bracket using another belt clamp.

The length of the belt should run between the carriage and the carriage bracket
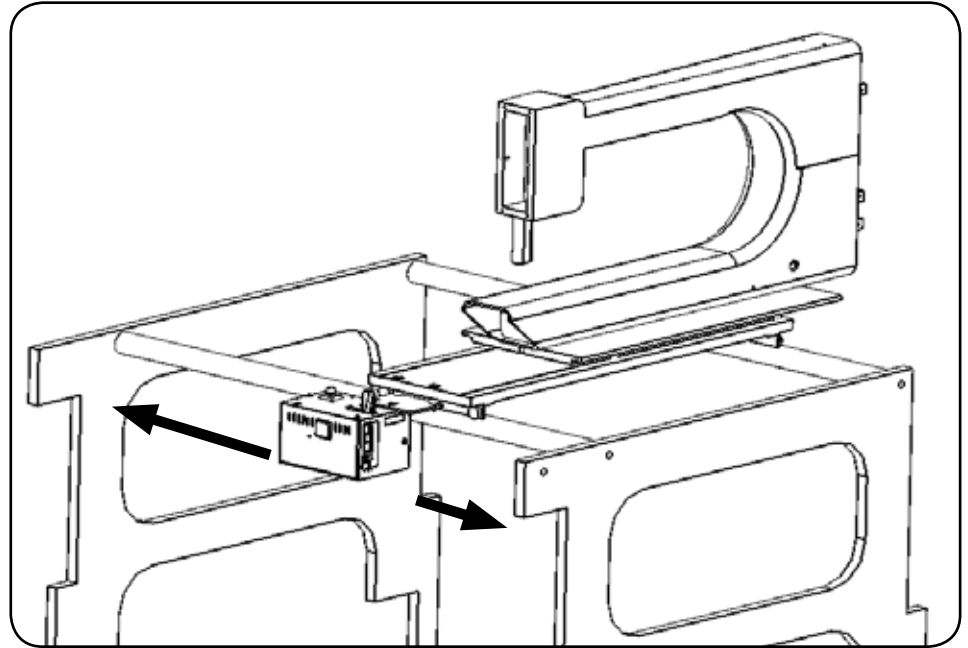
White Belt (Bag X1 and Bag X12)

1 To install the white belt, you will need to drill into the wood frame.

Slide the motor box as close to one end of frame as possible.

2 Mark and drill where the eye-bolt will be level with the Motor Box Pulley. (The eye-bolt attaches to the belt that runs through the pulley.)

3 Repeat steps 1-2 for remaining side of frame.

4 Attach the white belt to each of the eyebolts with the belt clamps.

See Appendix A.

5 Attach the eybolts to each side of the frame in the drilled holes with the belt teeth facing up.
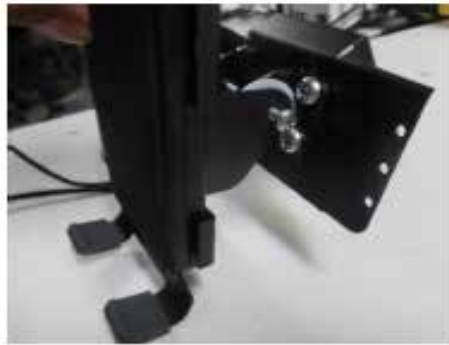
Release the locking lever on the motor box and run the belt over the two bearings and under the motor pulley.

Install the Android 10" Display (Bag D2)

1 *For machines with PerfectStitch upgrade skip these steps and go directly to the "Android Installation Guide."*

Mount the tablet bracket to the display bracket.

2 Loosen the faceplate screws and slide the display bracket tab into the gap.

Tighten the screws to secure the display bracket.

Refer to the "Android Installation Guide" for instructions on how to install the tablet.

Image not representative of the Android tablet, but the concept is the same

Display

1 Insert SD card into display.
Attach display to display bracket with provided screws.

Screws

Install display onto the machine using the provided screws.

2 Loosen faceplate screws and slide display bracket tab between faceplate and machine head. Tighten faceplate screws.

Connect Cables

Connect the power cable

1 Plug the power cable into the port on the motor box.

Ensure that the cable is running towards the top of the motor box and not towards the ground.

2 Run the cable along the carriage to the back of the machine, and then plug into the outlet or power source.

For Standard model continue to next page.

For Pro model continue to page 17.

For PerfectStitch continue to page20.

For Standard Model

1 Plug the Y- handlebar cable into the handle bar port of the black motor box.

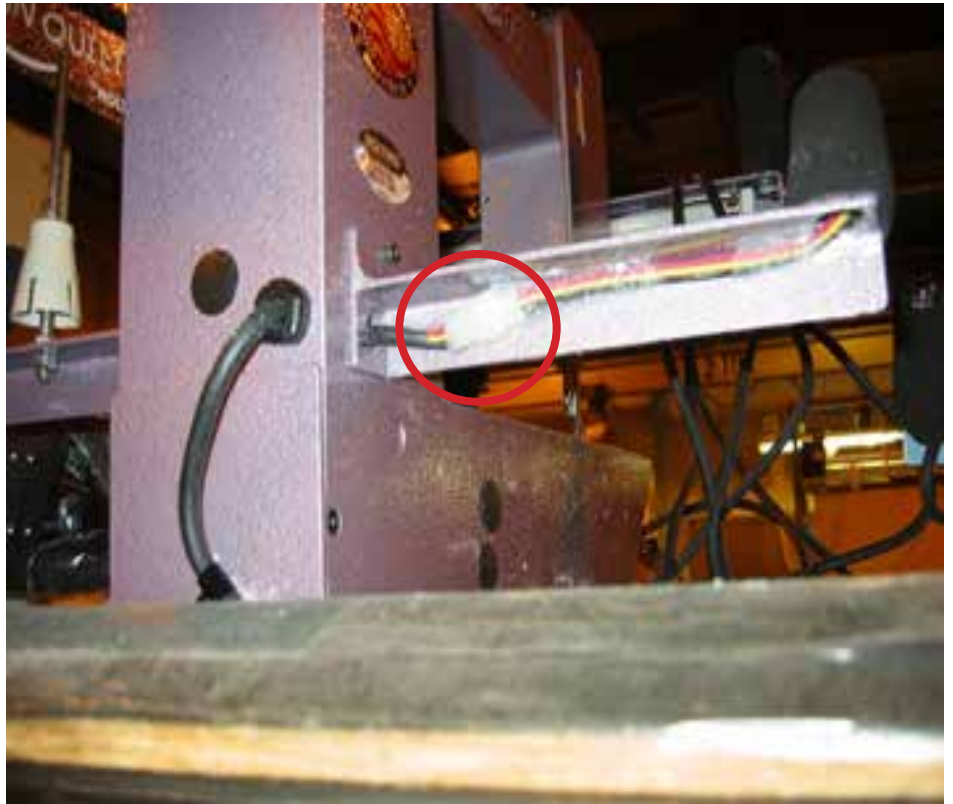**2** Run the handlebar cable along the base of the carriage to the back handlebars.

*Image not representative of all machine types.

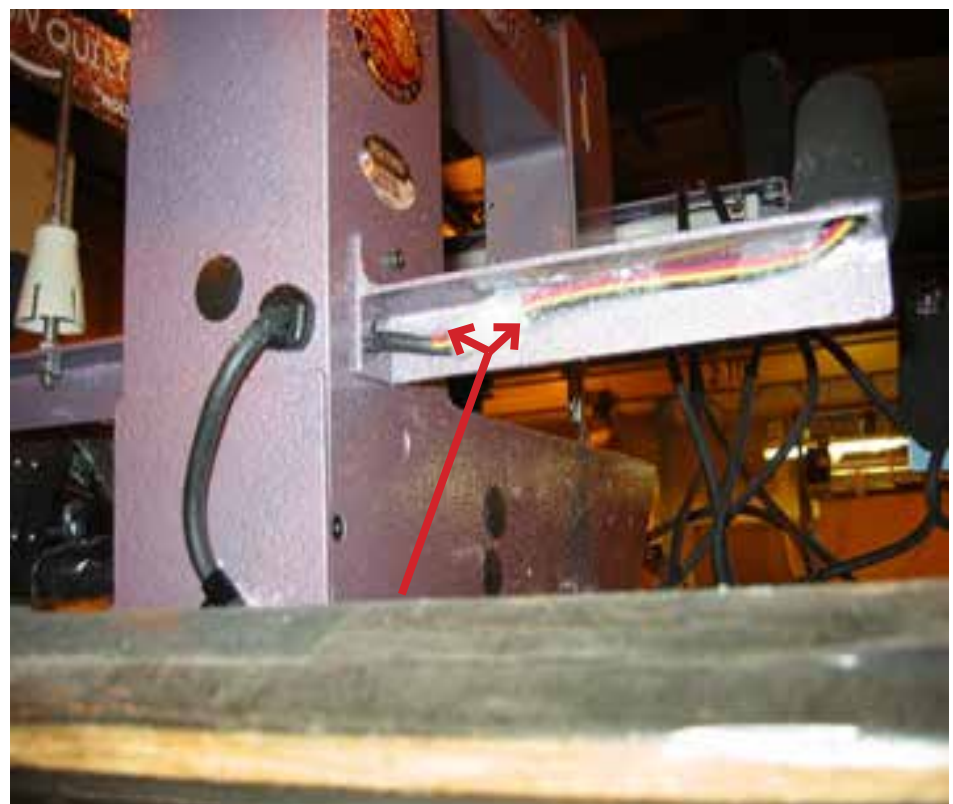**3** Disconnect the handlebar cable on the right rear handlebar.

4 Take the split side of the Start/Stop wire, and connect into each port.

The start stop wire will 'T' into the existing handlebar wire.

Repeat on the left side for the Needle Up wire.

If the machine handlebar wires on only one side the needle up wire is unnecessary.
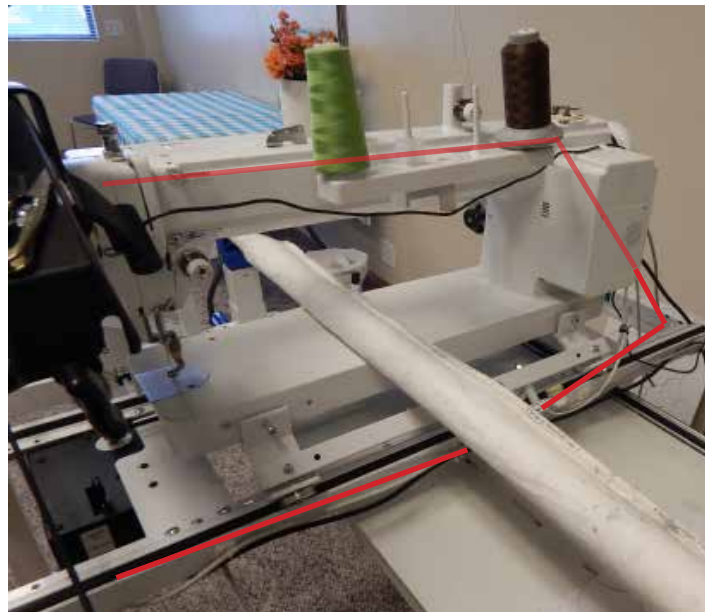
5 Plug the network style cable into the "Remote" port on the motor box.

Note: You will only have one of the cables pictured.

6 Run the cable with the handlebar cable around the back of the machine up to the display.

Use the provided anchors and zip-ties to secure the cables to the carriage. Make sure they are out of the way of any moving parts.

7 Connect the other end of the display cable into the display.

Android cables will plug into the RJ45 network connection on the hub on the back of the tablet.

Standard displays will plug into the slot on the bottom of the display.
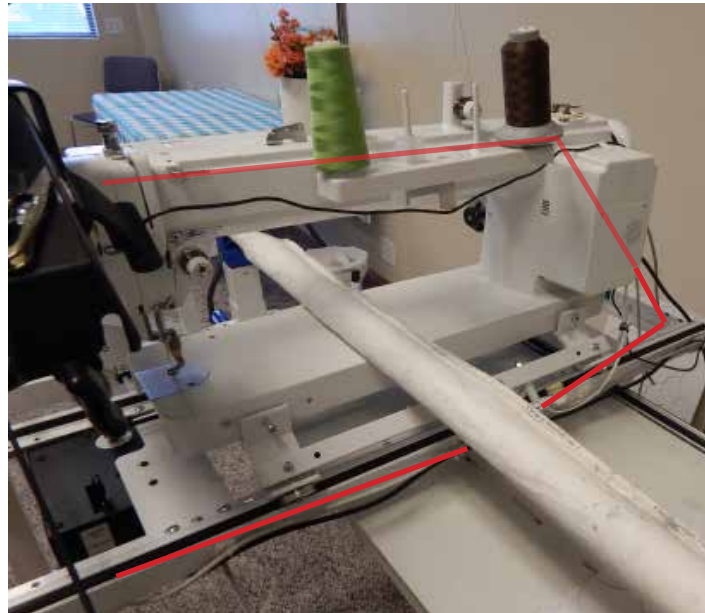
Pro Model

1 Plug the handlebar cable into the handle bar port of the black motor box.

2   Run the handlebar cable along the base of the carriage to the back handlebars.

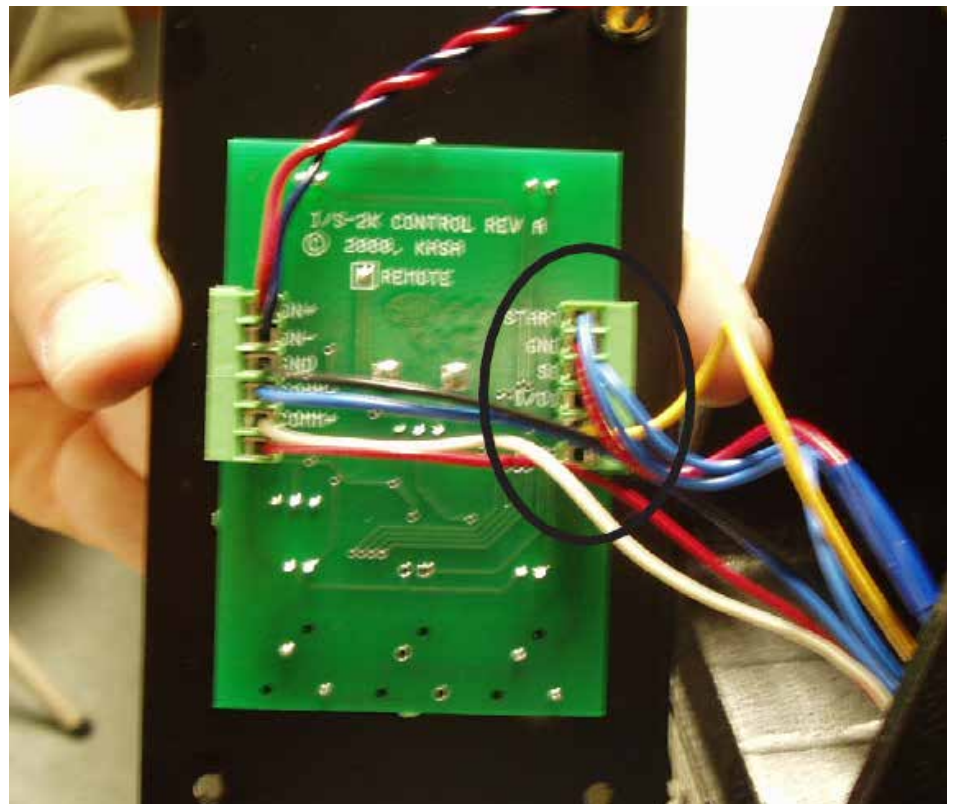**3**   Remove the front faceplate of the stitch regulator.

Loosen the screw for the terminals labeled start, GND, and SS.

Connect the ground (green) from both Needle Up and Start/Stop cables into the GND port.

Connect the control wire from the Start/Stop wire into Start terminal.

Connect the control wire from Needle Up cable into SS terminal.
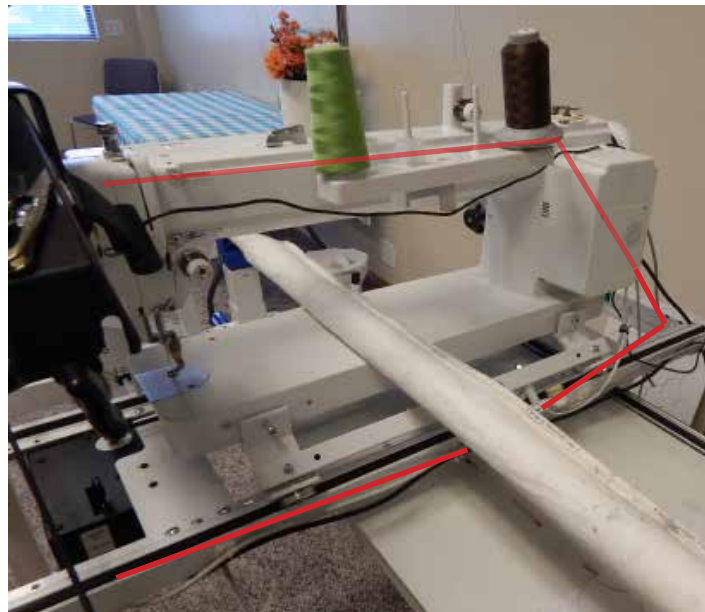
Reattach the faceplate.

5 Plug the network style cable into the "Remote" port on the motor box.

Note: You will only have one of the cables pictured.

6 Run the cable with the handlebar cable around the back of the machine up to the display.

Use the provided anchors and zip-ties to secure the cables to the carriage. Make sure they are out of the way of any moving parts.

6 Connect the other end of the display cable into the display.

Android cables will plug into the RJ45 network connection on the hub on the back of the tablet.

Standard displays will plug into the slot on the bottom of the display.

For PerfectStitch

1 Plug the remaining end into the Stitcher Box port on Butler.

2 Run the cable along the carriage with the power cable to the control box and plug into the robotics port on the PCB.

Use the provided anchors and zip-ties to secure the cables to the carriage. Make sure they are out of the way of any moving parts.
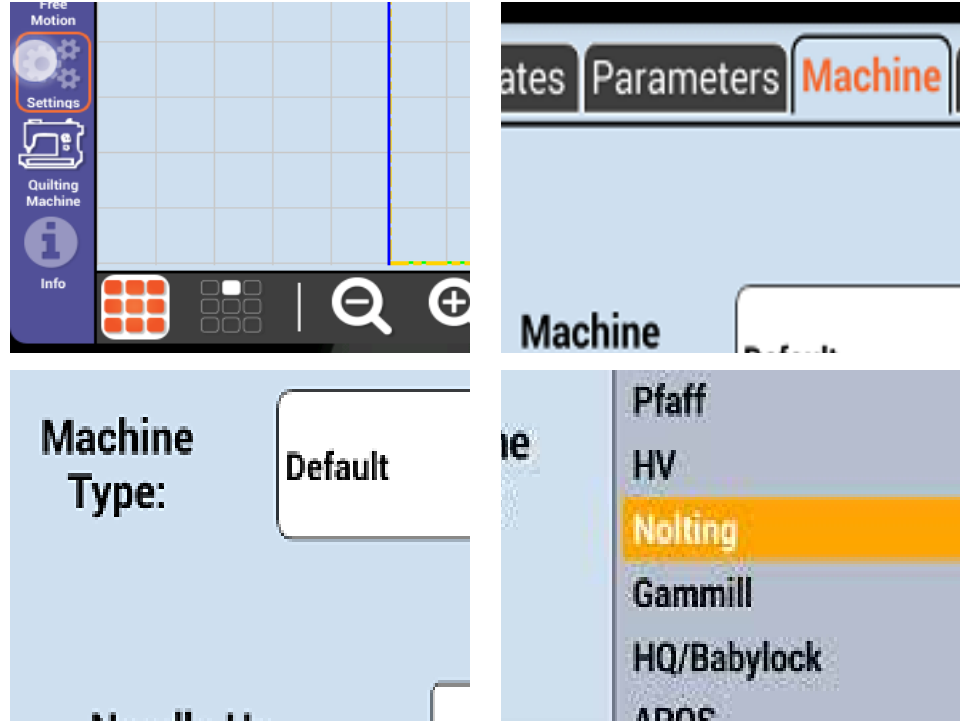

*Image not representative of all machine types.

Set Machine Type

Important: If the machine has been upgraded to PerfectStitch, then the machine type is to be set to Default.
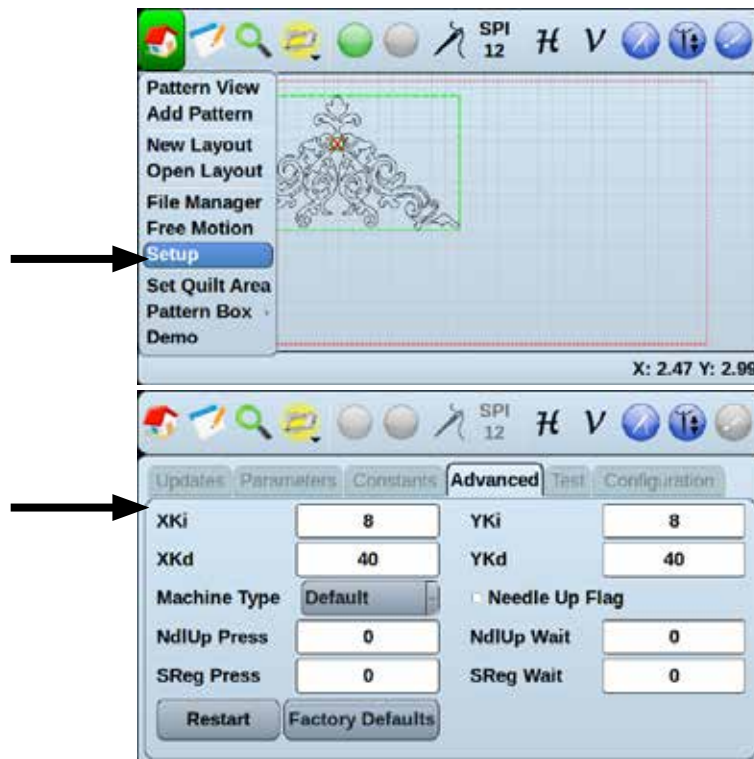
Android Tablet

1 Power on the display, go to Settings > Machine and set the machine type to Nolting.

Standard Display

1 Power on the display, go to Setup > Advanced and set the machine type to Nolting.

Check Belt Tension

1 Adjust the belt tension by tightening the nuts on the eye-bolts.

The black belt should have about 1/4" of play while the white belt should have between 1" and 1 1/2" of play with the machine in the middle of the frame.
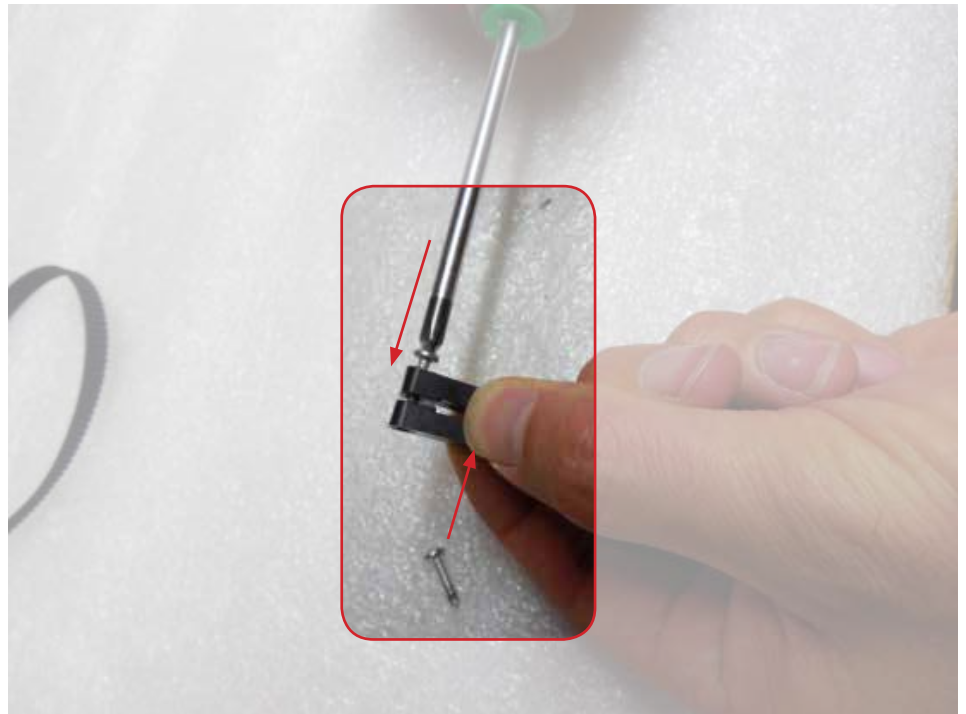
Loosen the nut closest to the eye

Pull the belt tight and tighten the other nut.

Appendix A - How to use Belt Clamps

A belt clamp consists of two clamps and two screws.

1 Using a Phillips screwdriver, insert each screw on opposite sides of the clamps and tighten halfway.

2 Thread the belt between the clamps, loop it around and reinsert it between the clamps.

3 Align the belt teeth, then finish tightening the clamps.

Appendix B- Additional help

Installing cables

Please refer to the Connecting Robot to Quilt Machine instruction set for help installing cables.
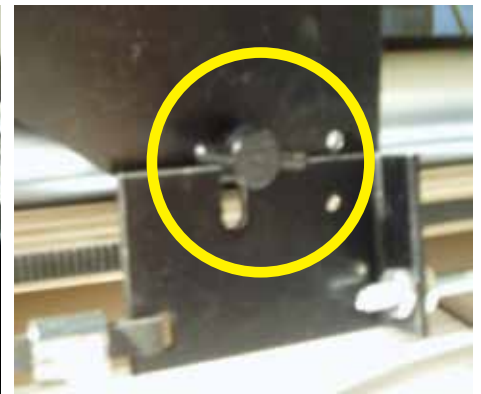
Power on the robotics

Use the power switch located on the side of the motor box with the ports to power the motor box off and on.

Disengage belts for free motion

In order to use free motion with the butler connected the belts will need to be disengaged.

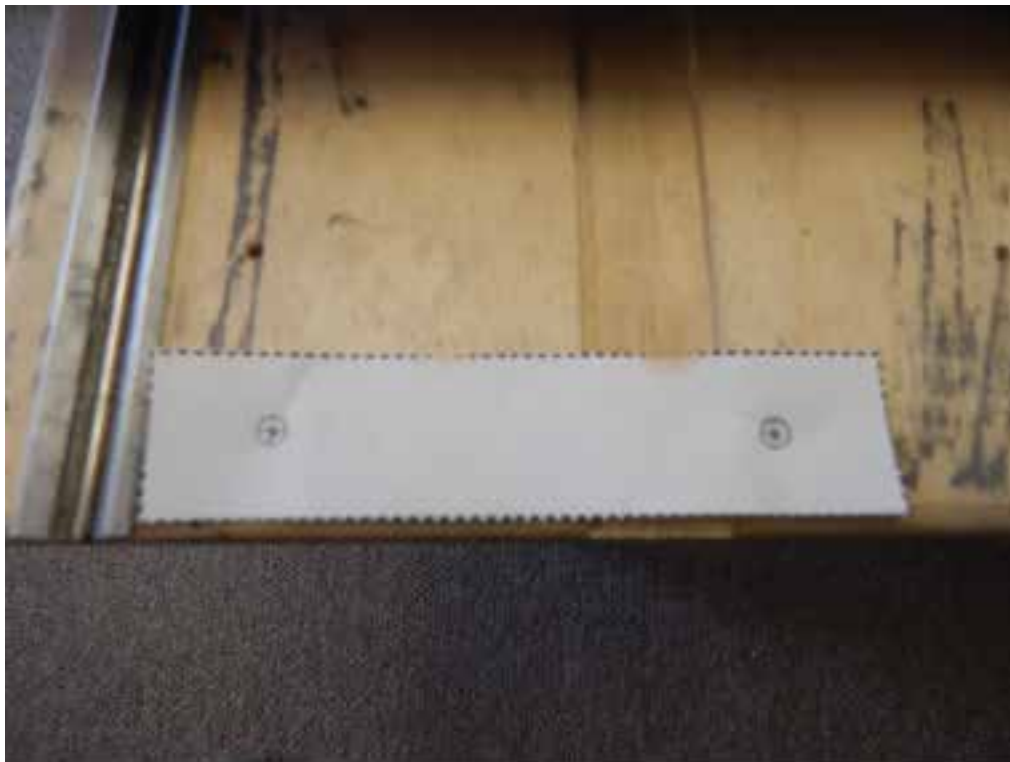To disengage the x-belt, move the locking lever away from the edge of the motor box.

To disengage the y-belt, loosen the wing-nut on the carriage bracket.

You can now use free motion quilting.

Nolting Motor Box Drill Template

When printing PDFs, DO NOT select fit to page, otherwise the template will be distorted when printed.

⊕
Drill bit size:
#1

⊕
Drill bit size:
#1

Line up the left side of the template with the front of the carriage rail on the right hand side.

Nolting Carriage Bracket Drill Template

⊕
Drill bit size:
#1

⊕
Drill bit size
#1

When printing PDFs, DO NOT select fit to page, otherwise the template will be distorted when printed.

Line up the right side of the template 9 inches from the front of the carriage on the left hand side of the carriage (from front).

Still need help?

Visit quiltez.com to learn how to contact us and find additional help material.