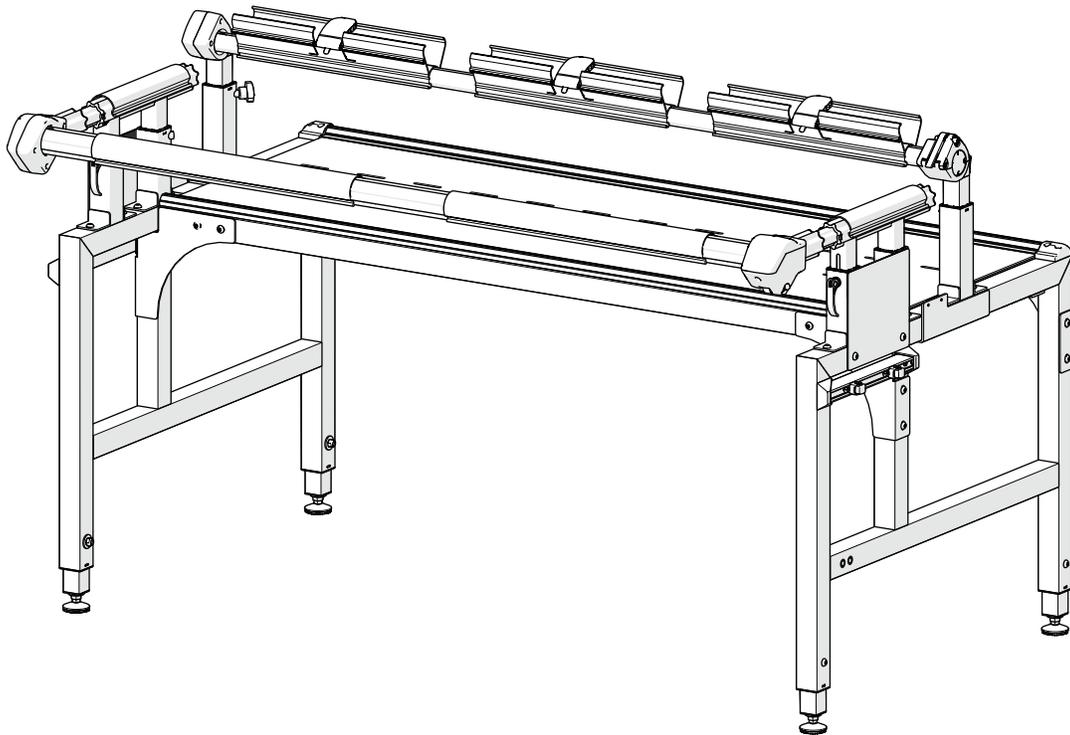


Quilter's Evolution

H O O P - F R A M E

Assembly & Use



My Frame Details

Use this page to record information about your frame. This will be helpful if you ever need to call a Grace Company support technician.

Frame Type: Quilter's Evolution Hoop-Frame

Date of Purchase: _____

What Machine are You Using? _____

Select Which Frame Accessories You Have Purchased:

Start-Right Cloth Leaders

Speed Control

QuiltMotion

Gracie Laser

Pattern Perfect

Sure Stitch

G-Series Top Plate

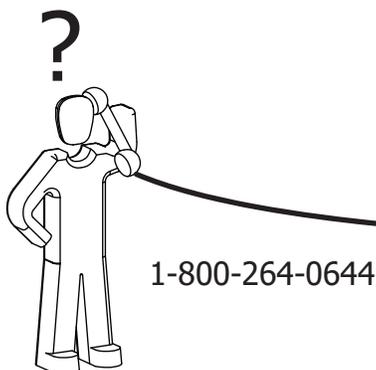
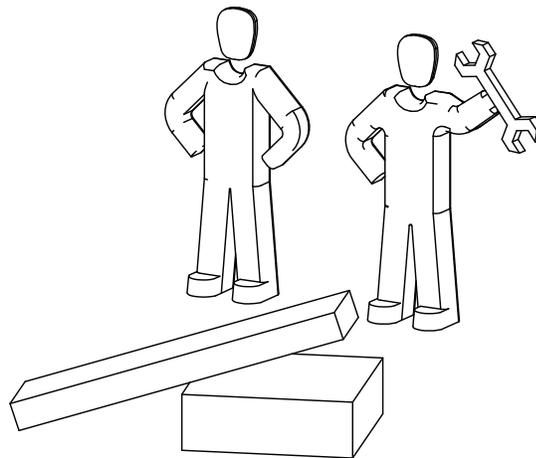
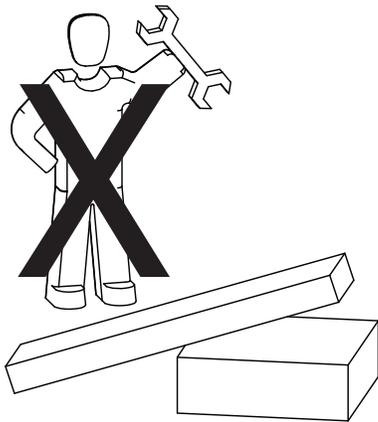
Sure Stitch Elite

Power Strip Accessory

Luminess Light Bar

Warranty Information

The Quilter's Evolution Hoop-Frame has a one-year limited warranty on all parts. Grace Company will repair or replace, at its discretion, any part with problems due to our manufacturing or defects in materials. This warranty does not cover parts damaged through misuse, improper storage, improper assembly, loss, natural events, and willful destruction. Parts must be returned to Grace Company, shipping prepaid, before we can repair or replace them. We will promptly return the repaired/replaced part at our expense if done within a year of the purchase date.



Grace
COMPANY

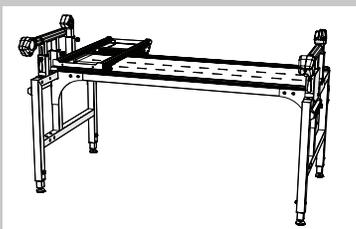
Welcome to Your Quilter's Evolution Hoop-Frame

We are pleased to introduce you to the newest part of your quilting setup. This frame has been especially designed to help quilters like you have the tools available to create quality projects.

This manual is broken into four sections (or parts). Notifications at the end of each section will direct you to switch to your machine manual or QuiltMotion manual for instructions on assembling those products. This creates a streamlined process of building a complete quilting setup in the most efficient way. Use the following flowchart to guide you in navigating multiple manuals. If you are not using one of the products in the flowchart, just move to the next item in the chart.

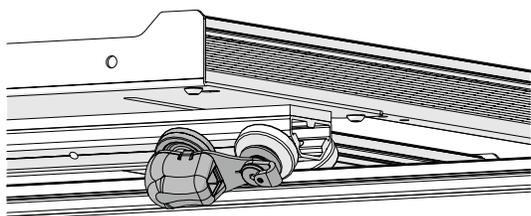
Thank you again for choosing us to help your quilting projects. We look forward to working with you.

- The Grace Company



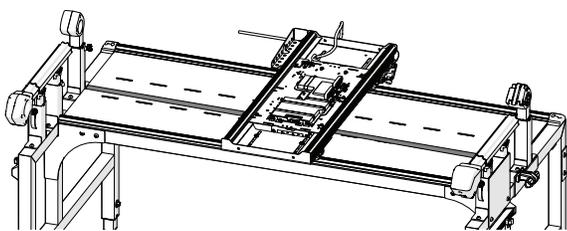
Start Here: Frame Manual: Part One

- Assemble the frame's legs, table, and sides.
- Install the channel lock onto the bottom carriage.
- Align your tracks.



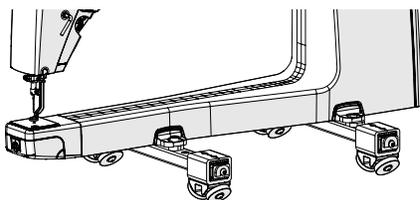
Quilting Machine Manual: Part One

- Install the lower encoder onto the bottom carriage.



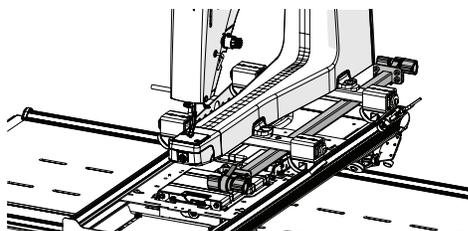
QuiltMotion Manual: Part One

- Prepare the bottom carriage.
- Install the long belt across the frame.



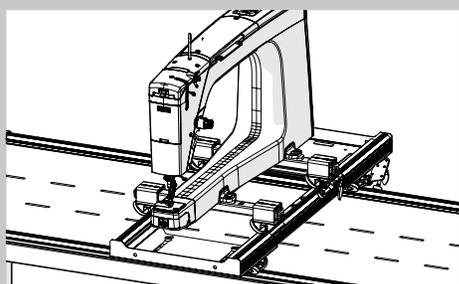
Quilting Machine Manual: Part Two

- Install your machine's wheels.
- Align your wheels.



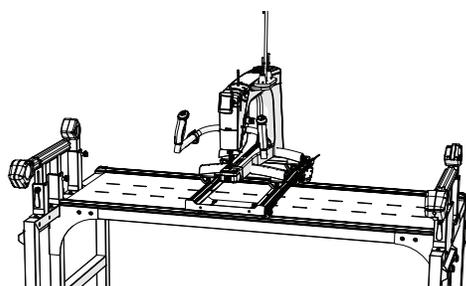
QuiltMotion Manual: Part Two

- Install the short belt.
- Tension the short belt.



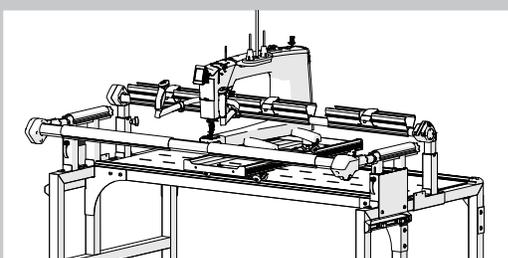
Frame Manual: Part Two

- Install the channel lock on the machine or top plate.
- Prepare the top plate and home sewing machine.
- Place the machine or top plate on the frame.



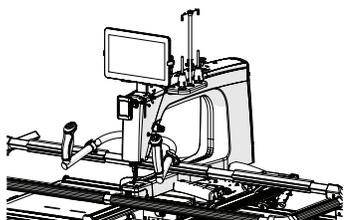
Quilting Machine Manual: Part Three

- Install the wheel covers, display, handles, thread mast.
- Install the upper encoder.



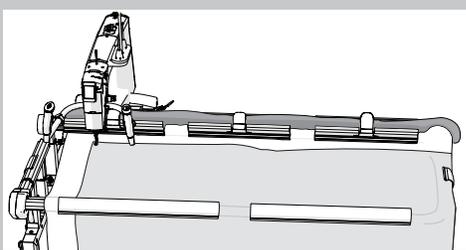
Frame Manual: Part Three

- Install the rails and fabric bungees.
- Position and adjust the rails.
- Adjust the carriage stop.
- Level the frame.



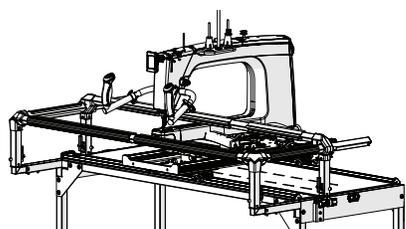
QuiltMotion Manual: Part Three

- Install the tablet bracket.
- Plug in QuiltMotion.



Frame Manual: Part Four

- Install the cloth leaders
- Attach the fabric



Quilting Machine Manual: Part Four

- Use the quilting modes and settings in the display.
- Maintain the machine and perform repairs.

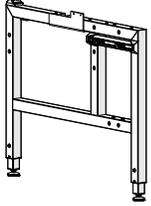
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Included Parts and Tools

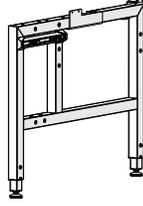
Box 1

Left Side Leg Assembly



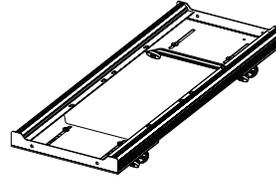
QEF-09-16529

Right Side Leg Assembly



QEF-09-16563

Bottom Carriage Assembly



CNT-09-13523

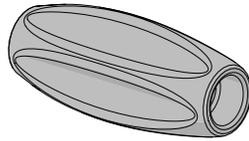
BOX 1: INNER HARDWARE BOX

Large Hand Wheel



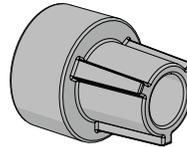
PLA-05-11550

Large Hand Wheel Knob



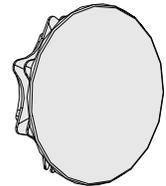
PLA-05-11551

Hand Wheel Collar



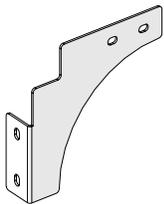
PLA-05-11552

Quilt-Backing Rail Press-In Cap



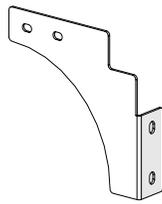
QEF-05-16498

Corner Brace A (x2)



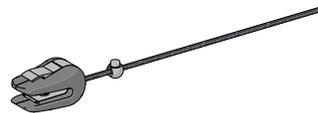
QEF-04-15543

Corner Brace B (x2)



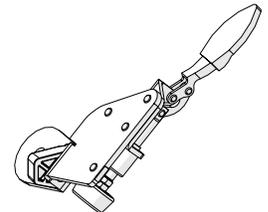
QEF-04-15544

Bungee Clamps (4 pack)



ACC-01-10261

Dual-Wheel Channel Lock (x2)

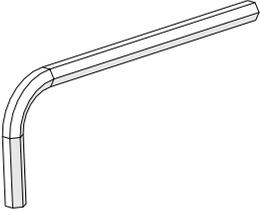


ACC-09-13057

Included Parts and Tools Continued

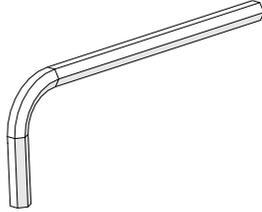
BOX 1: INNER HARDWARE BOX (continued)

**Allen Wrench
6 mm**



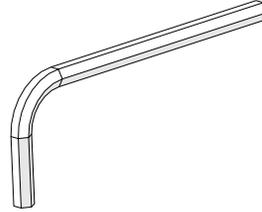
HDW-03-10742

**Allen Wrench
5 mm**



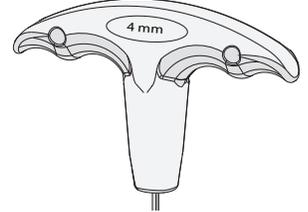
HDW-03-10741

**Allen Wrench
2.5 mm**



HDW-03-10165

**T-handle Allen
Wrench 4 mm**



HDW-03-13114

**Open-End Wrench
10 mm and 13 mm**



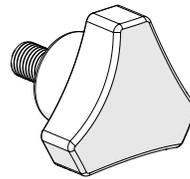
HDW-03-10743

**Open-End Wrench
14 mm and 17 mm**



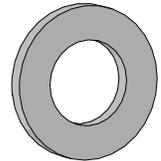
HDW-03-12347

**3-Wing Knob
M8 x 16 mm (x2)**



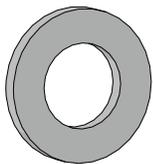
C11-03-14895

**Hand Wheel
Washer**



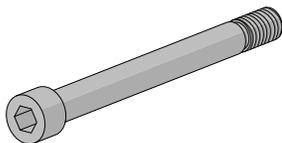
HDW-03-13035

**M8
Washer (x4)**



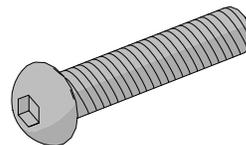
HDW-03-10733

**Hand Wheel Handle
Bolt M8 x 85 mm**



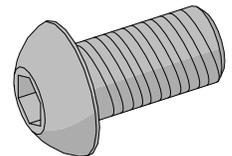
HDW-03-11195

**SBHCS
M10 x 55 mm**



HDW-03-11605

**SBHCS
M8 x 20 mm (x4)**

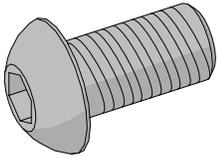


HDW-03-14970

Included Parts and Tools Continued

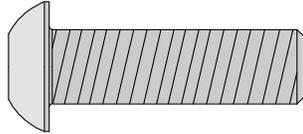
BOX 1: INNER HARDWARE BOX (continued)

SBHCS
M8 x 16 mm (x32)



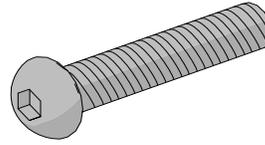
HDW-03-10951

SBHCS
M6 x 20 mm (x2)



HDW-03-10088

SBHCS
M8 x 55 mm (x4)

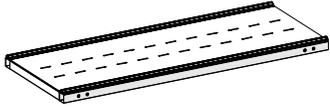


HDW-03-10726

Included Parts and Tools Continued

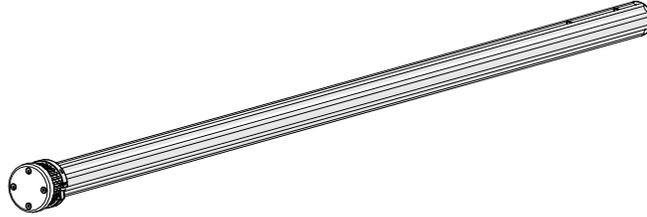
Box 2

**5 ft Table with
Tracks Assembly**



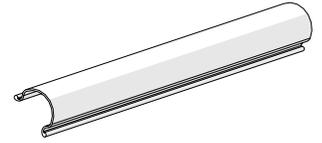
QEF-09-16576

**5 ft Star Rail
Assembly**



ACC-09-16567

**Front Rail
Clamp (x2)**

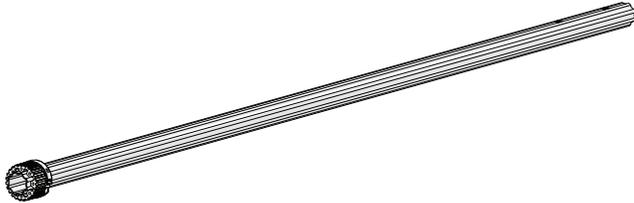


QEF-05-16505

Included Parts and Tools Continued

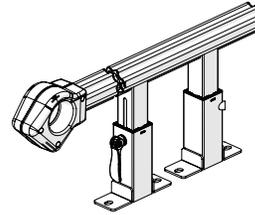
Box 3

**Take-Up Rail
Assembly**



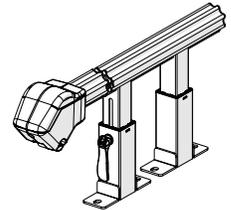
QEF-09-16540

Left Side Rail



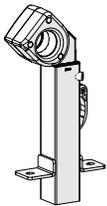
QEF-09-16531

Right Side Rail



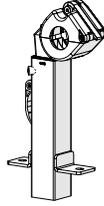
QEF-09-16570

**Left Take-Up
Rail Tower**



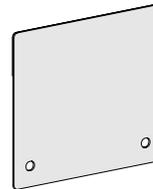
QEF-09-16580

**Right Take-Up
Rail Tower**



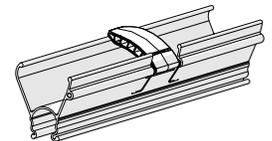
QEF-09-16542

Logo Plate (x2)



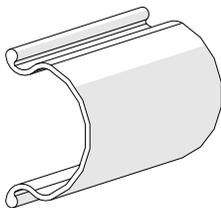
ACC-09-17266

**Take-Up Rail
Clamp (x3)**



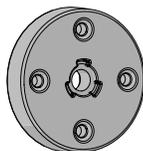
ACC-09-16566

Side Rail Clamp (x2)



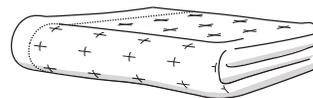
QEF-05-16506

**Rolling Take-Up
Rail Cap**



QEF-05-15715

**Hoop Frame
Cloth Leaders**



ACC-01-12246

**Frame Reference
Card Hook**



HDW-03-16369

Animated Instructions

To provide the best possible customer experience, we also offer animated video instructions for setting up this product. To view the animated instructions, visit our website at:

<https://www.graceframe.com/en/promotion/quilters-evolution-hoop-frame>

You can also use your smartphone to scan this QR code:



Part One

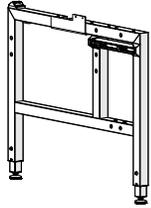
Complete Part One of these instructions before assembling your quilting machine or any accessories.

At the end of each part, you will be instructed to switch to specific sections of your machine manual, QuiltMotion manual, or other accessory manuals, if you are preparing to assemble them at this time. If you have not made those purchases, simply skip those steps.

Task 1 - Setting the Frame Height

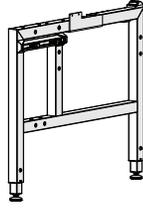
Parts & Tools Needed:

Left Side Leg Assembly



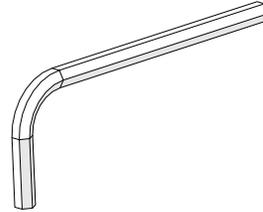
(Box 1)

Right Side Leg Assembly



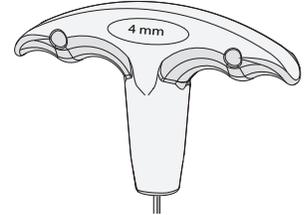
(Box 1)

Allen Wrench 5 mm



(Box 1: Hardware Box)

T-handle Allen Wrench 4 mm



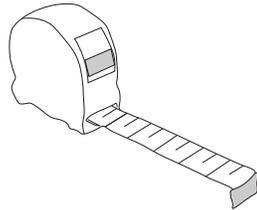
(Box 1: Hardware Box)

Open End Wrench 10 mm and 13 mm



(Box 1: Hardware Box)

Tape Measure

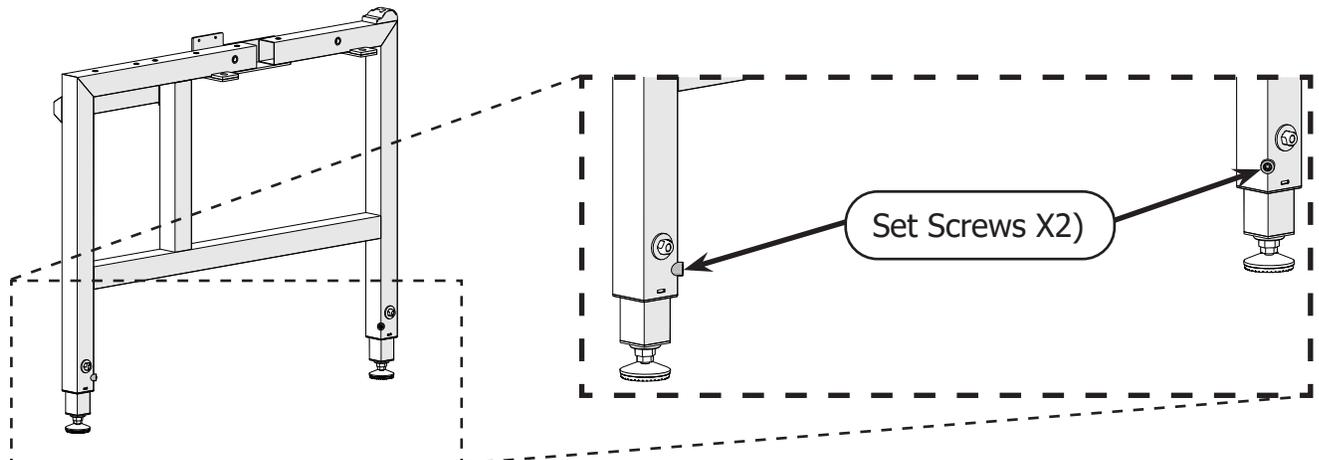


(not included)

Instructions

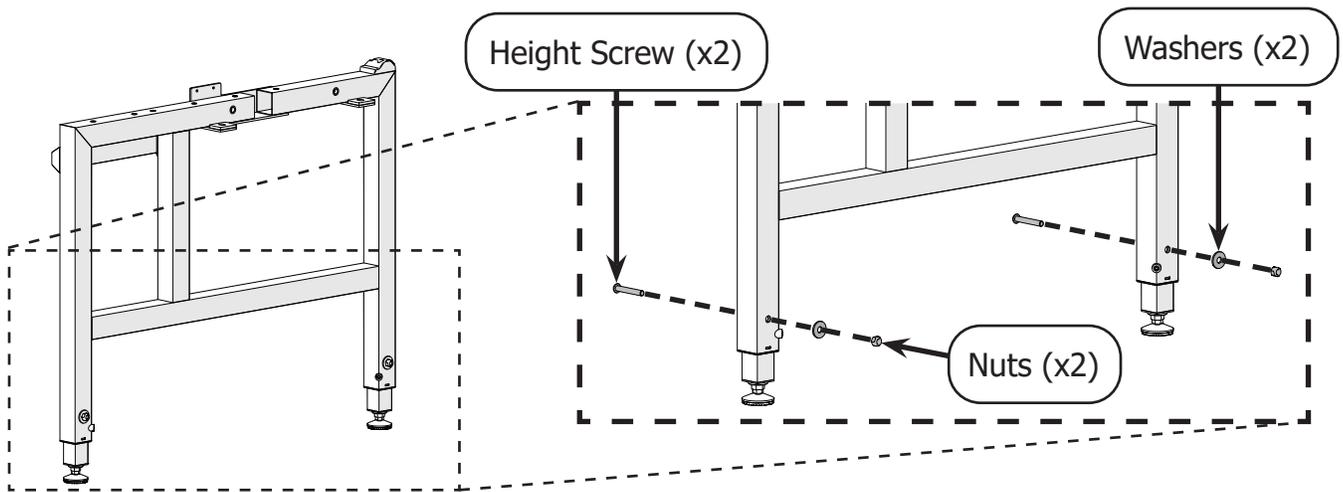
The frame height is important for comfortable prolonged use. Ideally, the handlebars on your machine or top plate will be around elbow height once your setup is fully assembled. Take the following steps to set your frame height:

- 1 Loosen the two **set screws** at the base of the **left leg** with the 4 mm T-handle Allen wrench.

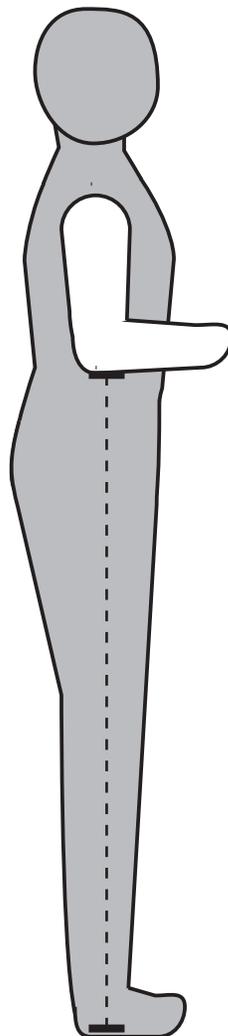


Task 1 - Setting the Frame Height (continued)

- 2 Use the 5 mm Allen wrench and the 13 mm open end wrench to remove the **height screws**, **washers**, and **nuts**.

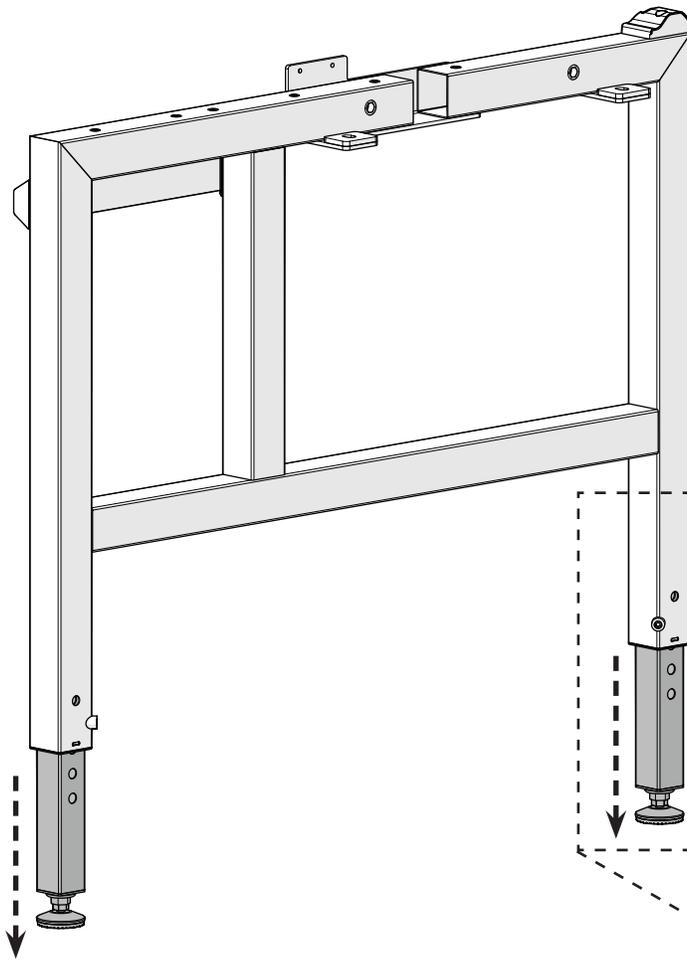


- 3 Hold your arm at a 90 degree angle. Use a tape measure to measure the distance from your elbow to the floor.

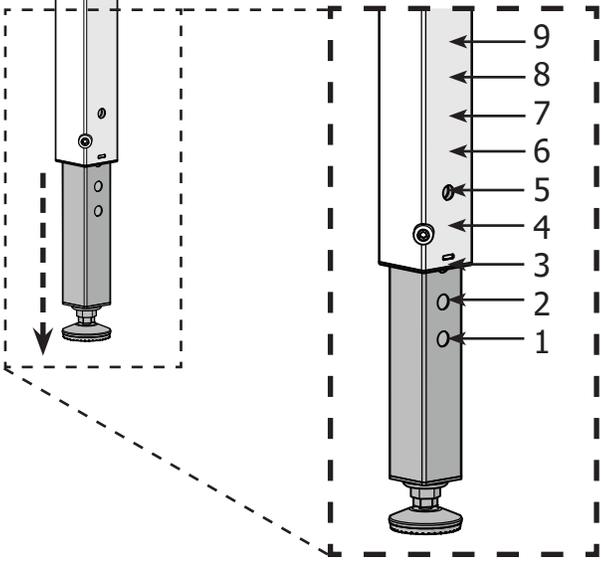


Task 1 - Setting the Frame Height (continued)

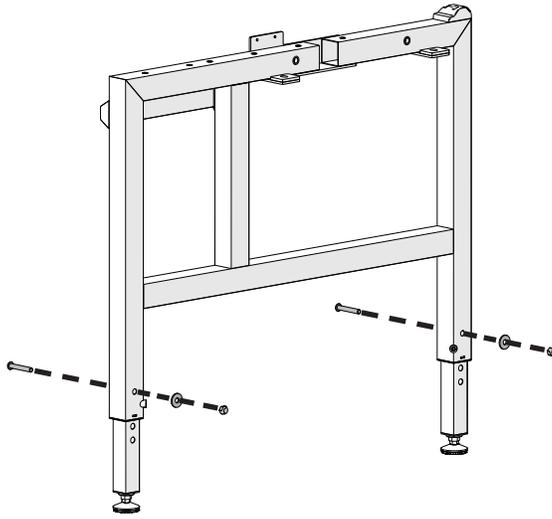
- 4 Find the hole number closest to your elbow height in the chart. Then pull out the bottom part of each leg to align its two screw holes with the hole you've chosen in the bottom part of the leg. Set all legs to the same hole.



| Hole Number | Elbow to Floor |
|-------------|----------------|
| 1 | 40 Inches |
| 2 | 41 Inches |
| 3 | 42 Inches |
| 4 | 43 Inches |
| 5 | 44 Inches |
| 6 | 45 Inches |
| 7 | 46 Inches |
| 8 | 47 Inches |
| 9 | 48 Inches |

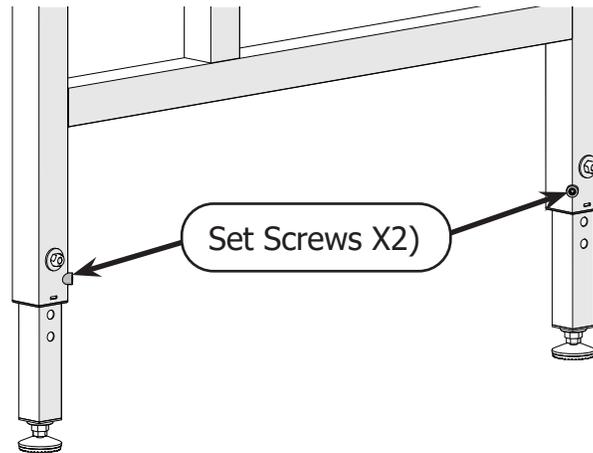


- 5 Secure in place with the screws, washers, and nuts. Tighten with the 5 mm Allen wrench, and 13 mm open end wrench.

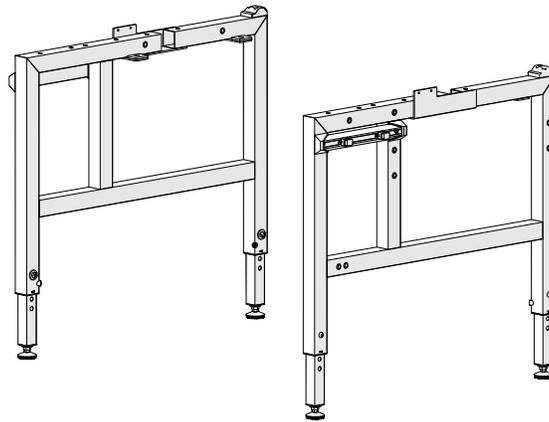


Task 1 - Setting the Frame Height (continued)

- 6 Tighten the two **set screws** with the 4 mm T-handle Allen wrench.



- 7 Repeat steps 1-2 and steps 4-5 for the right leg, making sure to set it to the same height as the left leg.

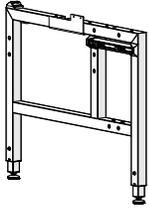


- 8 **Result:** Both legs are set to the same height.

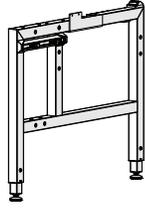
Task 2 - Installing the Table

Parts & Tools Needed:

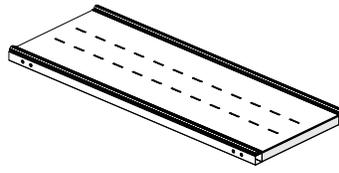
Left Side Leg Assembly



Right Side Leg Assembly

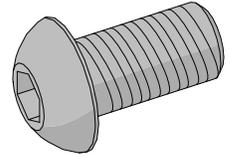


5 ft Table with Tracks Assembly



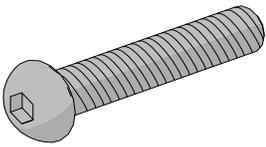
(Box 2)

SBHCS
M8 x 20 mm (x4)



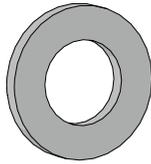
(Box 1: Hardware Box)

SBHCS
M8 x 55 mm (x4)



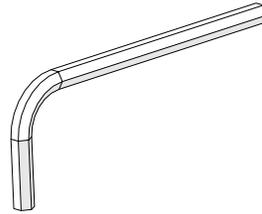
(Box 1: Hardware Box)

M8 Washer (x4)



(Box 1: Hardware Box)

Allen Wrench
5 mm

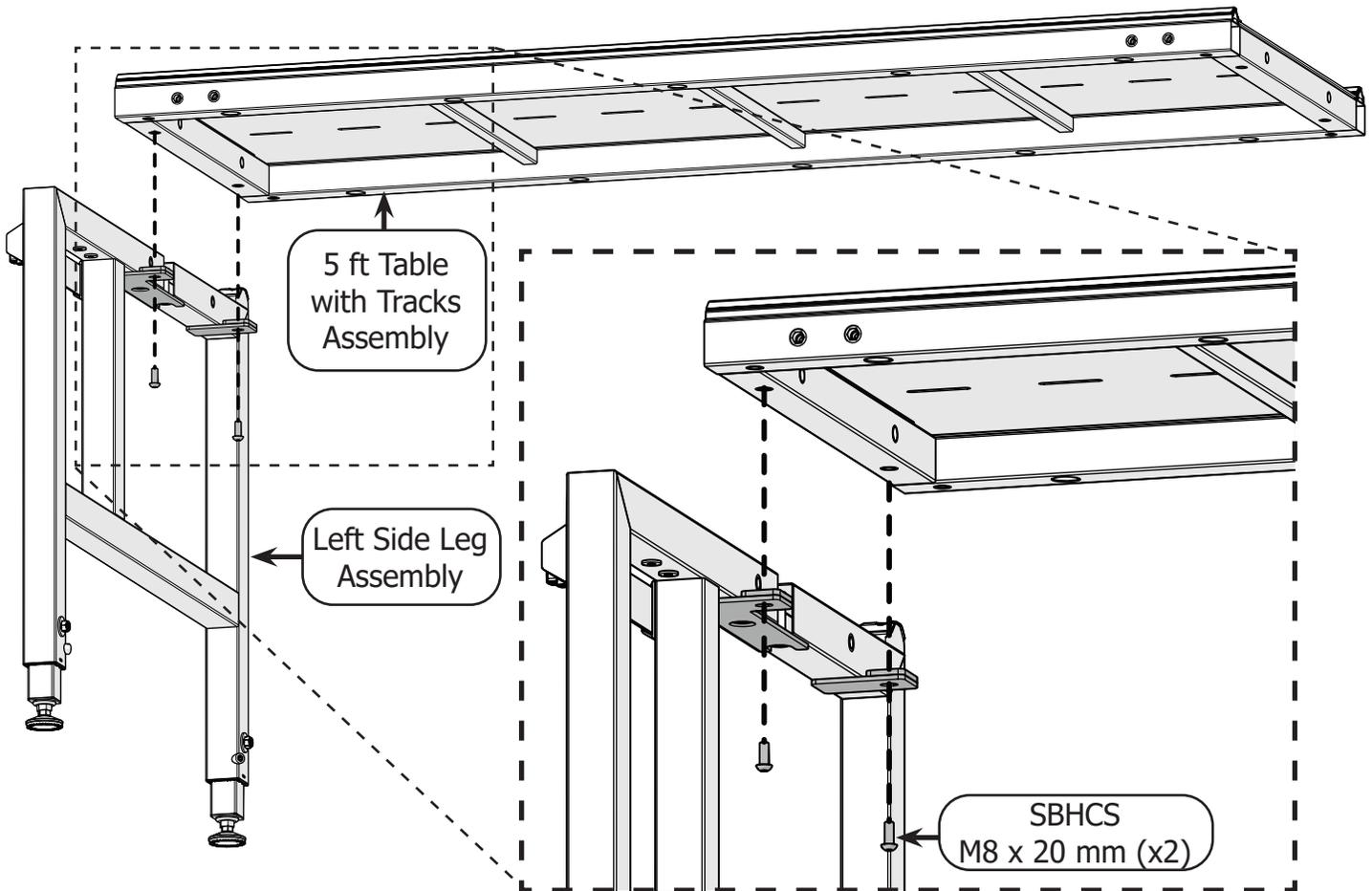


Task 2 - Installing the Table (continued)

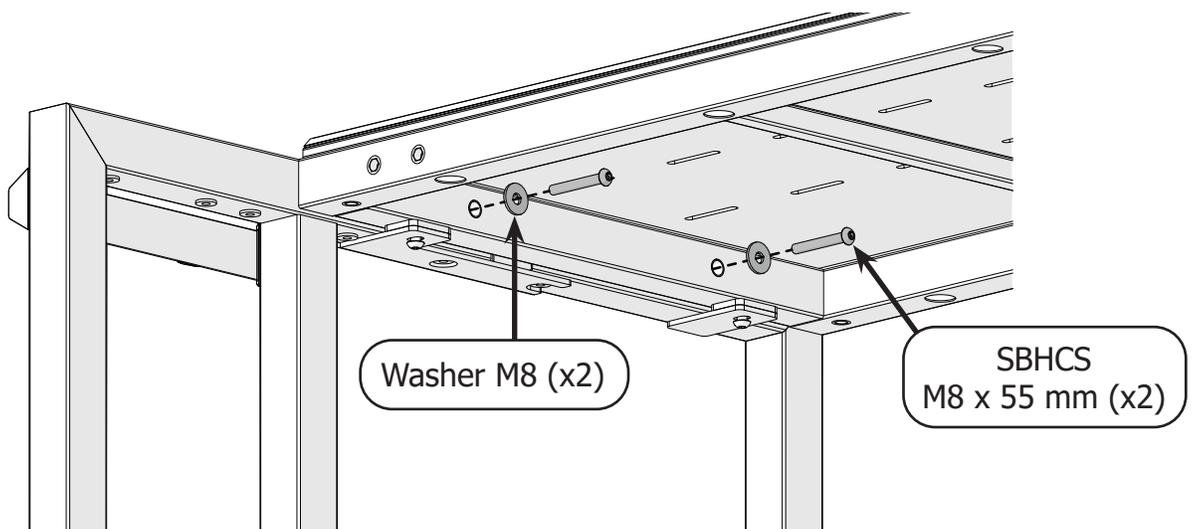
Instructions

With help from a friend, take the following steps to assemble the frame table:

- 1 Use the 5 mm Allen wrench and two **M8 x 20 mm SBHCS** to loosely connect one side of the **5 ft table with tracks assembly** to the **left side leg assembly**. Do not tighten.

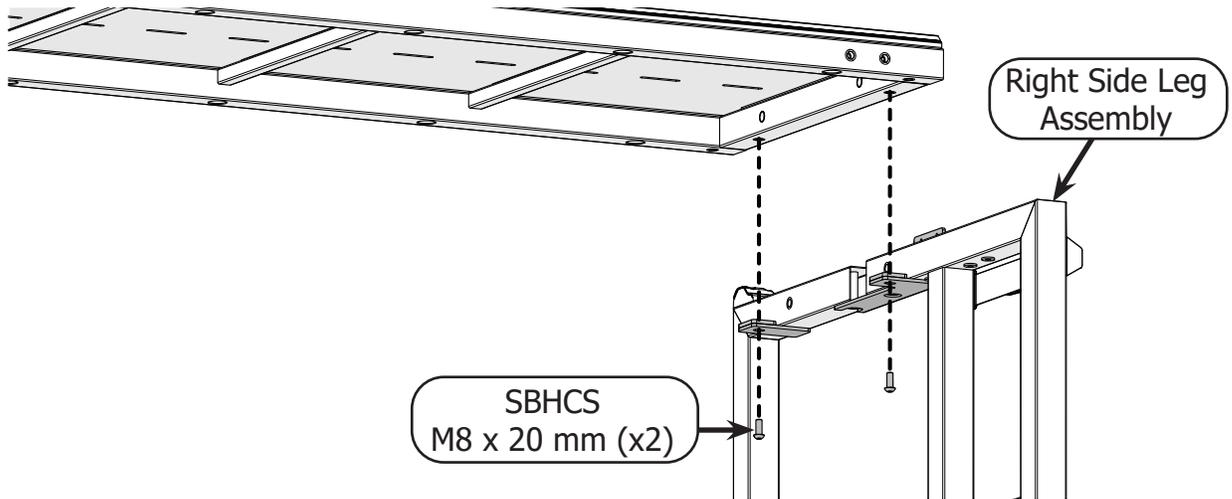


- 2 Loosely install two **M8 x 55 mm SBHCS** and two **M8 washers** with the 5 mm Allen wrench.

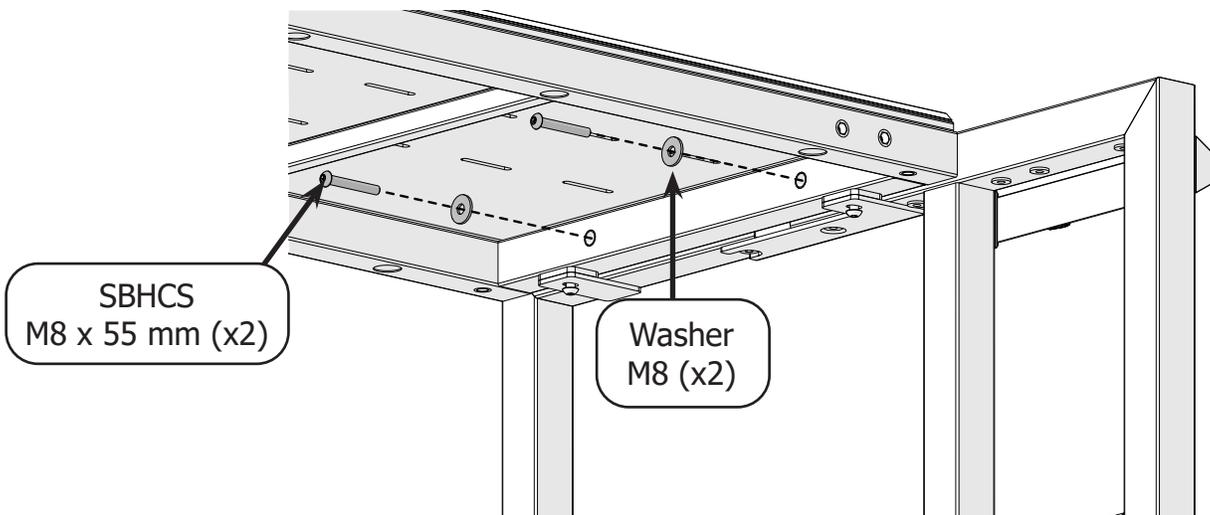


Task 2 - Installing the Table (continued)

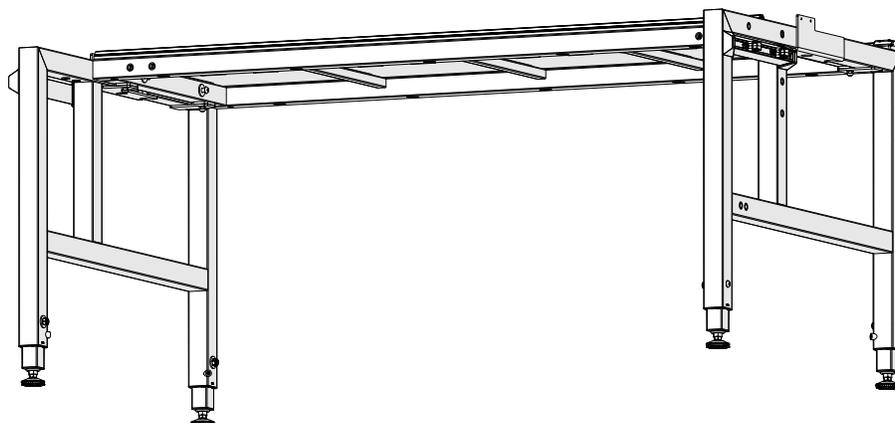
- 3 Use two more **M8 x 20 mm SBHCS** and the 5 mm Allen wrench to loosely connect the other end of the table to the supports on the inside of the **right leg**.



- 4 Loosely install two **M8 x 55 mm SBHCS** and two **M8 washers** with the 5 mm Allen wrench.



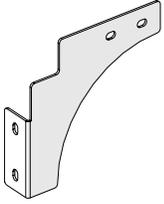
- 5 **Result:** The table section has been loosely installed onto the frame legs. All the screws installed in this task should be loose and will be tightened at the end of the next task.



Task 3 - Attaching the Corner Braces

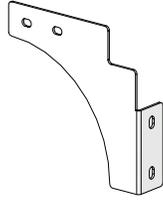
Parts & Tools Needed:

Corner Brace A (x2)



(Box 1: Hardware Box)

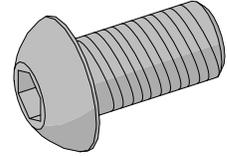
Corner Brace B (x2)



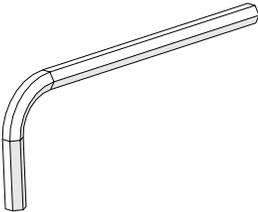
(Box 1: Hardware Box)

Frame Reference
Card Hook

(Box 3)

SBHCS
M8 x 16 mm (x16)

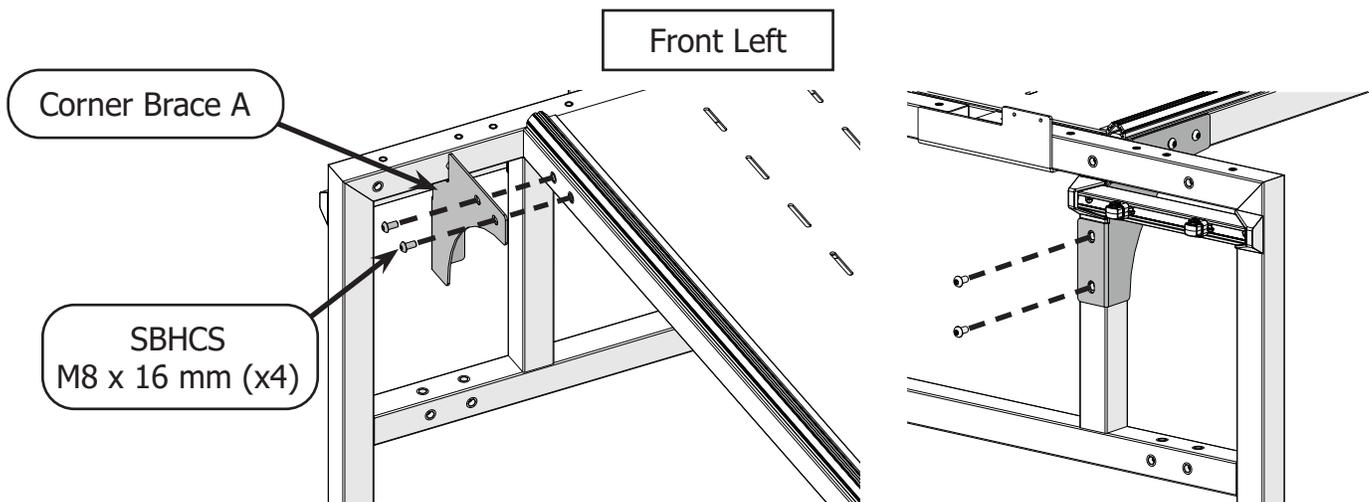
(Box 1: Hardware Box)

Allen Wrench
5 mm

Instructions

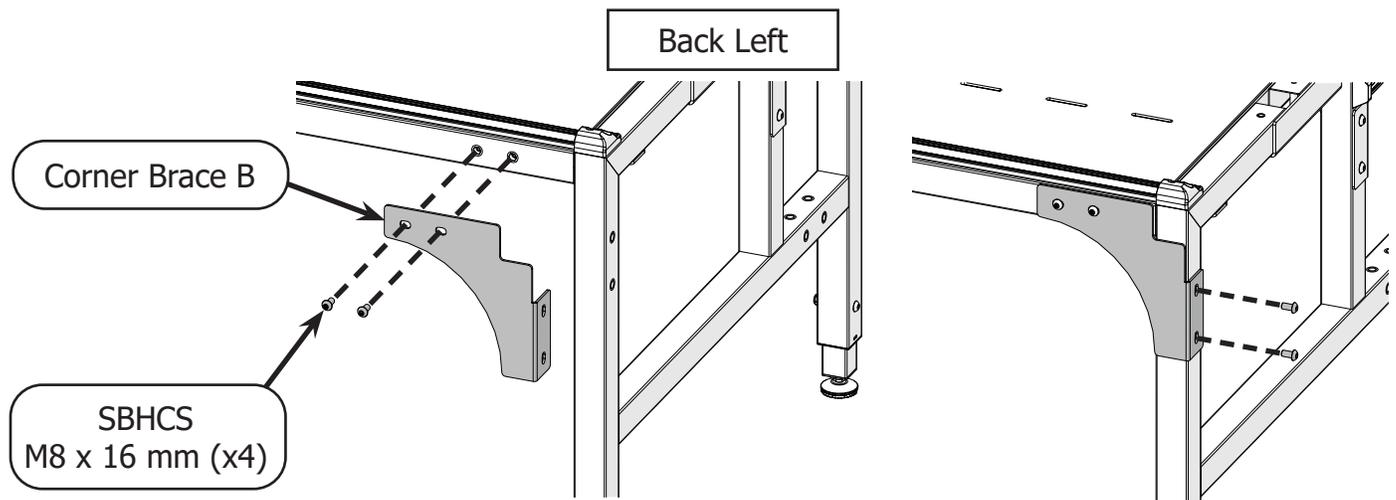
The corner braces help support the table and make the frame stronger and sturdier. Take the following steps to attach the corner braces to the frame:

- 1 Loosely attach a **corner brace A** to the front left corner of the frame using four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.

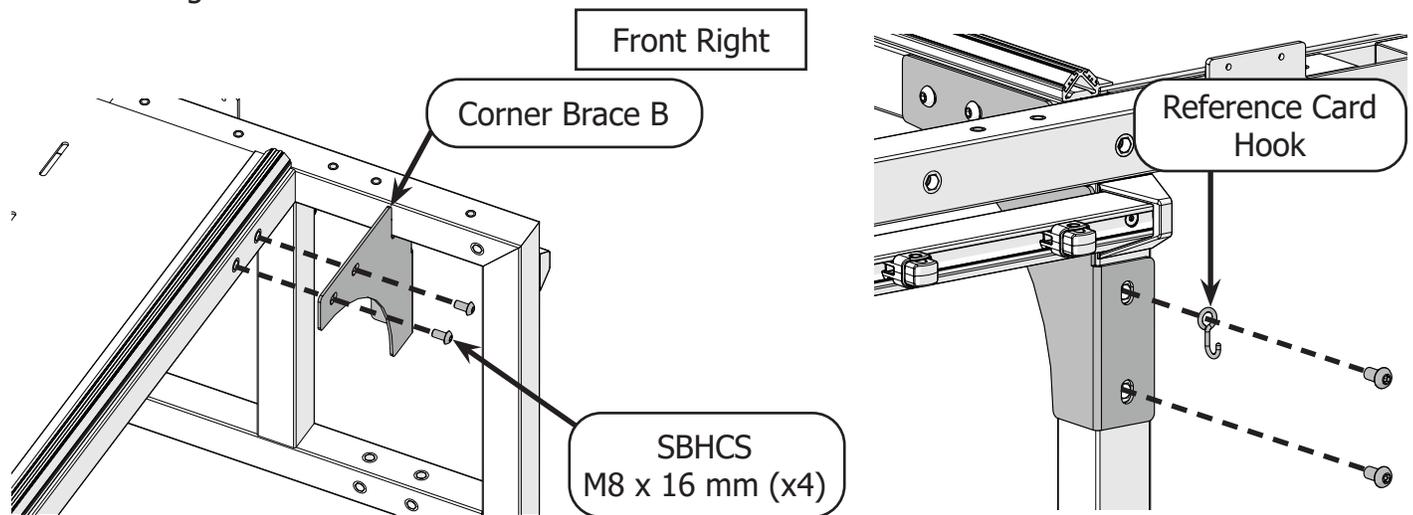


Task 3 - Attaching the Corner Braces (continued)

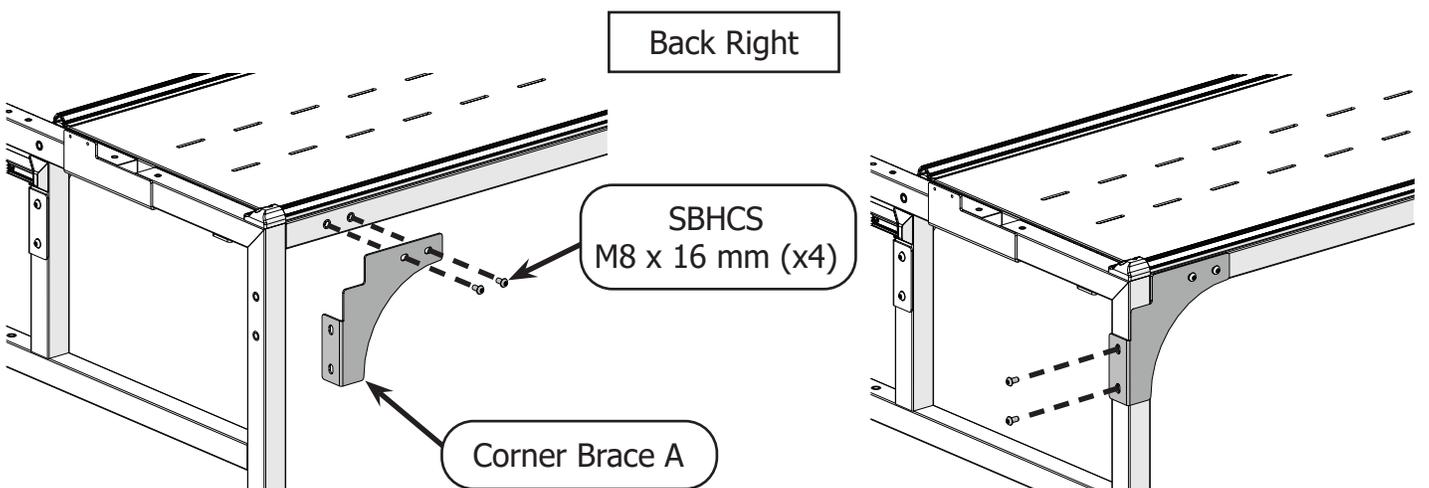
- 2 Loosely attach a **corner brace B** to the back left corner of the frame using four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.



- 3 Loosely attach a **corner brace B** and the **reference card hook** to the front right corner of the frame using four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.

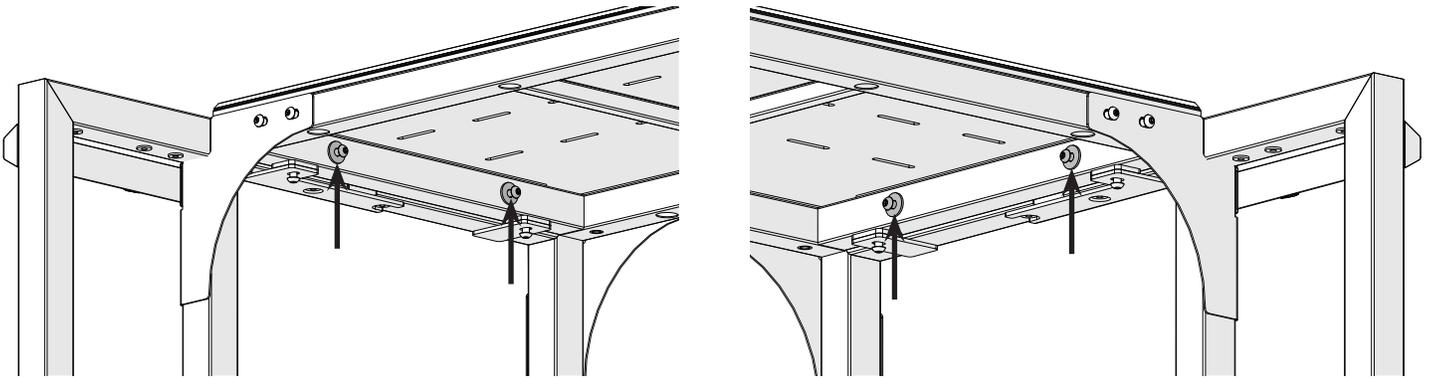


- 4 Loosely attach a **corner brace A** to the back right corner of the frame using four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.

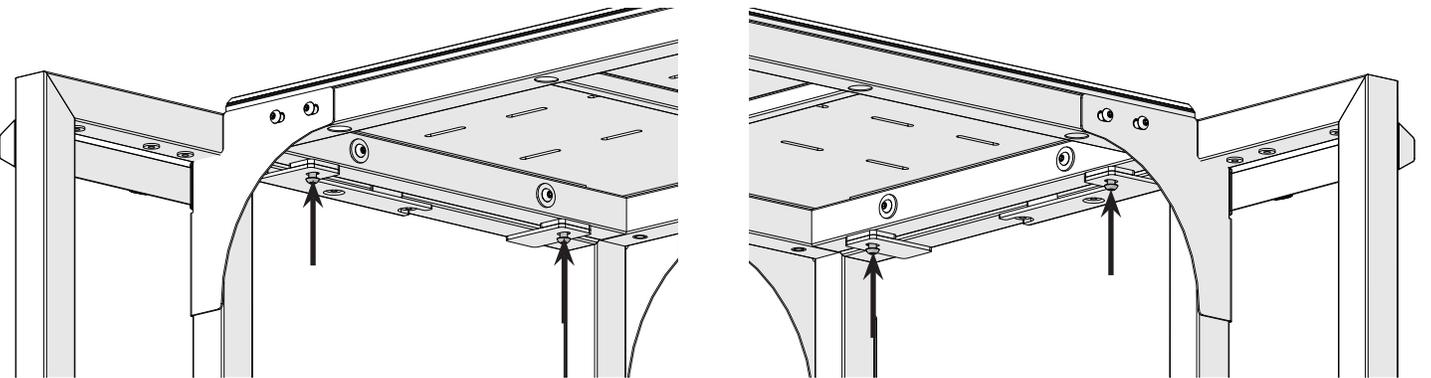


Task 3 - Attaching the Corner Braces (continued)

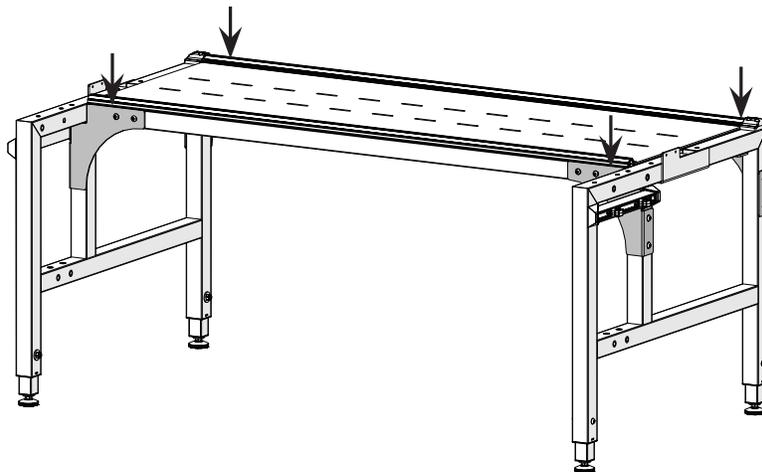
- 5 Tighten the four **M8 x 55 mm SBHCS** screws you left loose in task 4.



- 6 Tighten the four M8 x 20 mm SBHCS you left loose in task 4.



- 7 Use the 5 mm Allen wrench to tighten all sixteen M8 x 16 mm SBHCS for the corner braces.

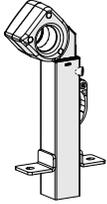


- 8 **Result:** The frame is sturdy and aligned.

Task 4 - Installing the Take-Up Rail Holders

Parts & Tools Needed:

Left Take-Up Rail Holder



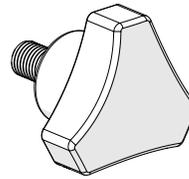
(Box 3)

Right Take-Up Rail Holder



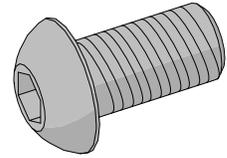
(Box 3)

3-Wing Knob (x2)



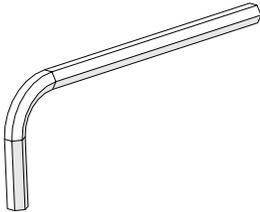
(Box 1: Hardware Box)

SBHCS
M8 x 16 mm (x4)



(Box 1: Hardware Box)

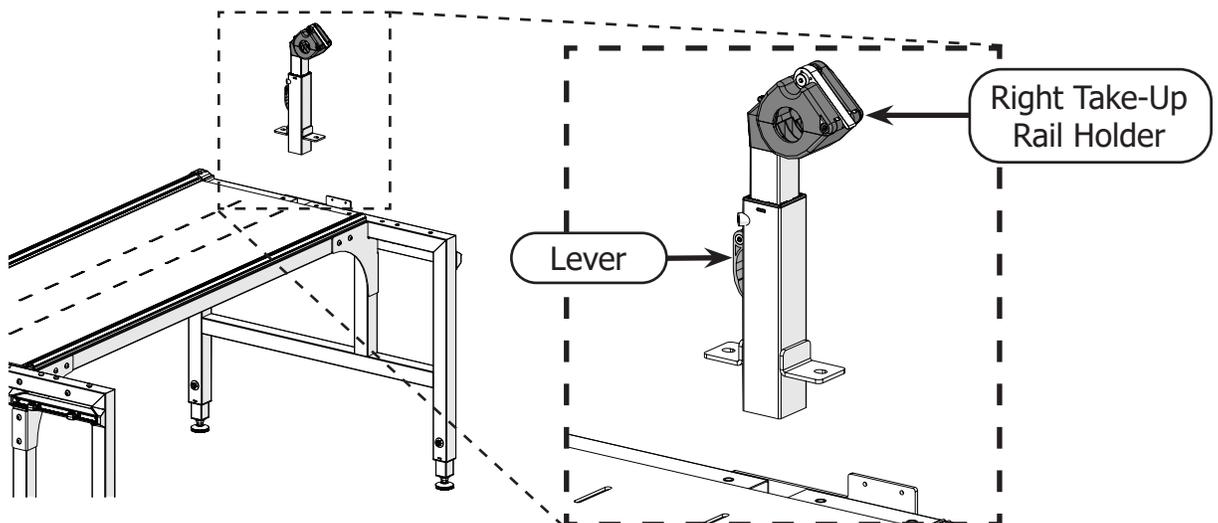
Allen Wrench
5 mm



Instructions

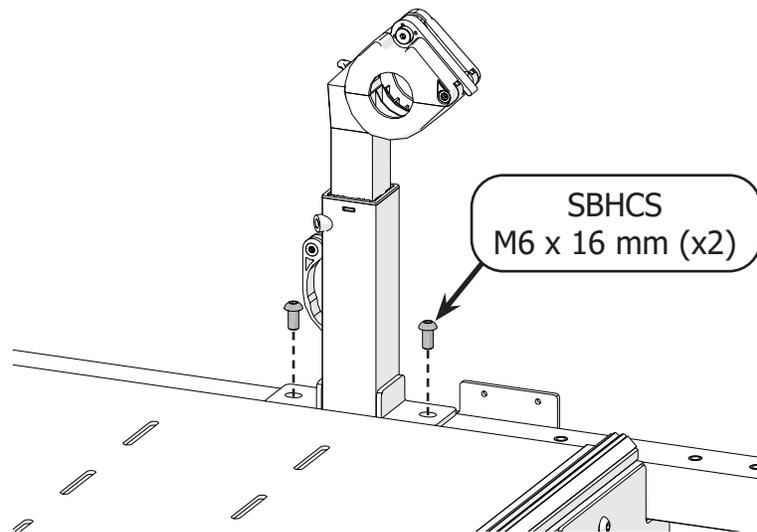
The take-up rail holders hold the take-up rail of the frame and can be adjusted to hold the rail higher or lower. Take the following steps to install the take-up rail holders:

- 1 Insert the **right take-up rail holder** into the right side of the frame with the **lever** on the back.

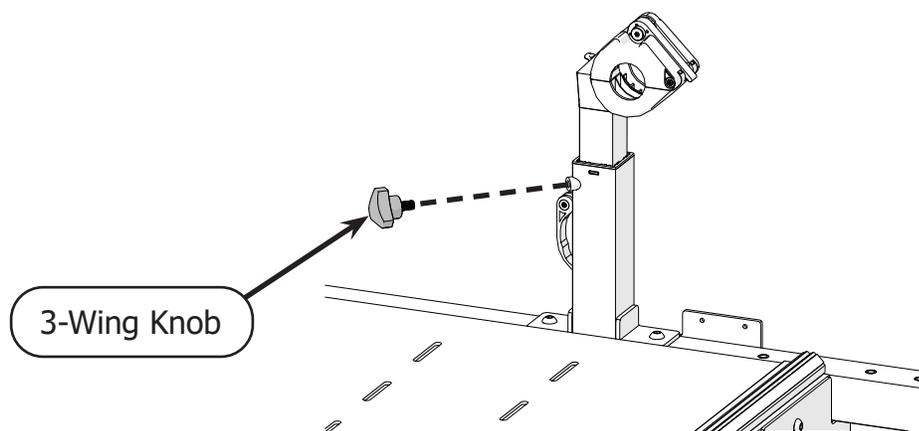


Task 4 - Installing the Take-up Rail Holders (continued)

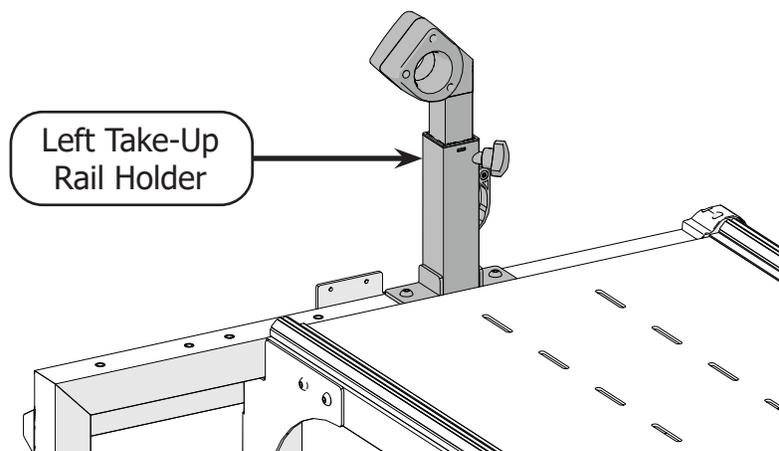
- 2 Secure the rail holder in place with two **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.



- 3 Screw one of the **3-wing knobs** into the hole on the inside of the take-up rail holder above the lever.

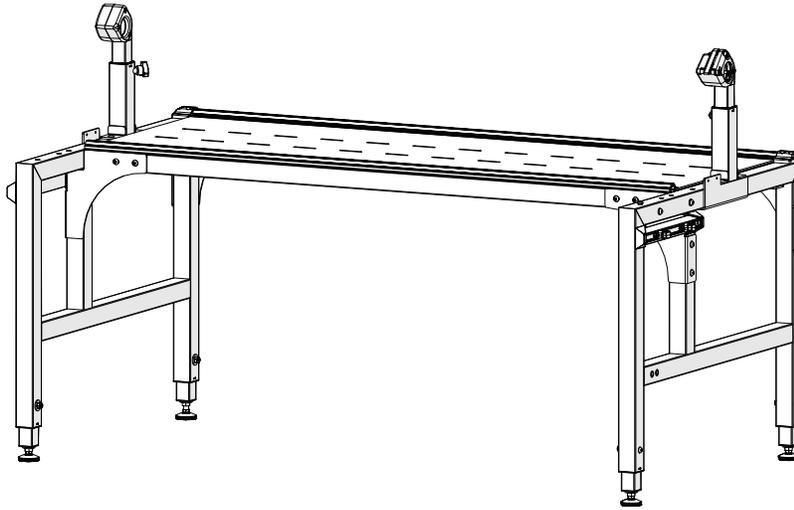


- 4 Repeat steps 1-3 for the **left take-up rail holder** on the other side of the frame.



Task 4 - Installing the Take-up Rail Holders (continued)

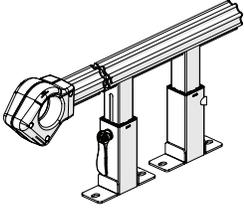
5 **Result:** The take-up rail holders are installed.



Task 5 - Installing the Side Rails

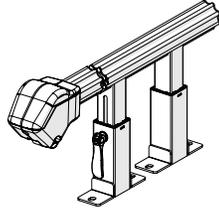
Parts & Tools Needed:

Left Side Rail



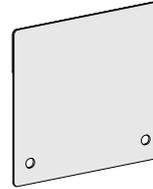
(Box 3)

Right Side Rail

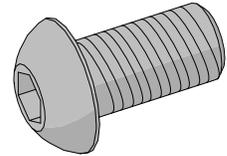


(Box 3)

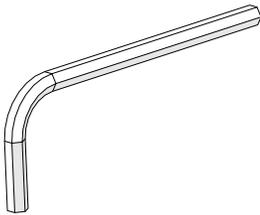
Logo Plate (x2)



(Box 3)

SBHCS
M8 x 16 mm (x12)

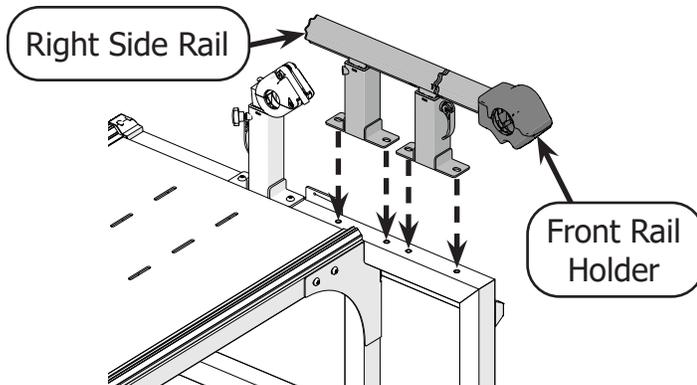
(Box 1: Hardware Box)

Allen Wrench
5 mm

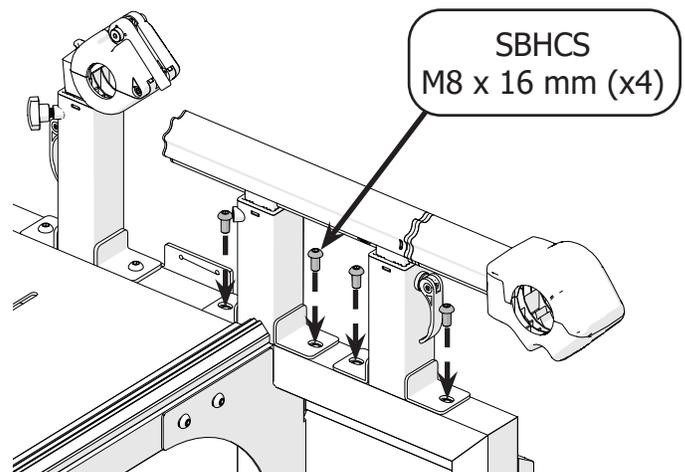
Instructions

The side rails provide support for the sides of your fabric and also hold the front rail. Take the following steps to install the side rails.

- 1 Place the **right side rail** onto the right side of the frame with the **front rail holder** facing the front of the frame. Align the brackets with the holes in the top of the leg.

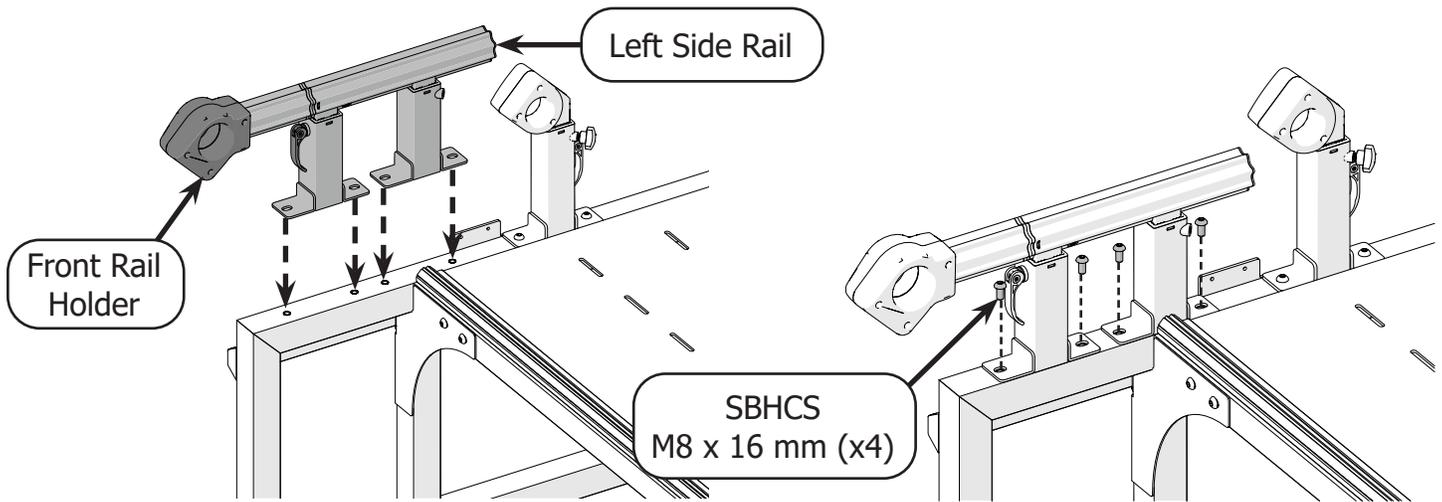


- 2 Secure the side rail in place with four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.

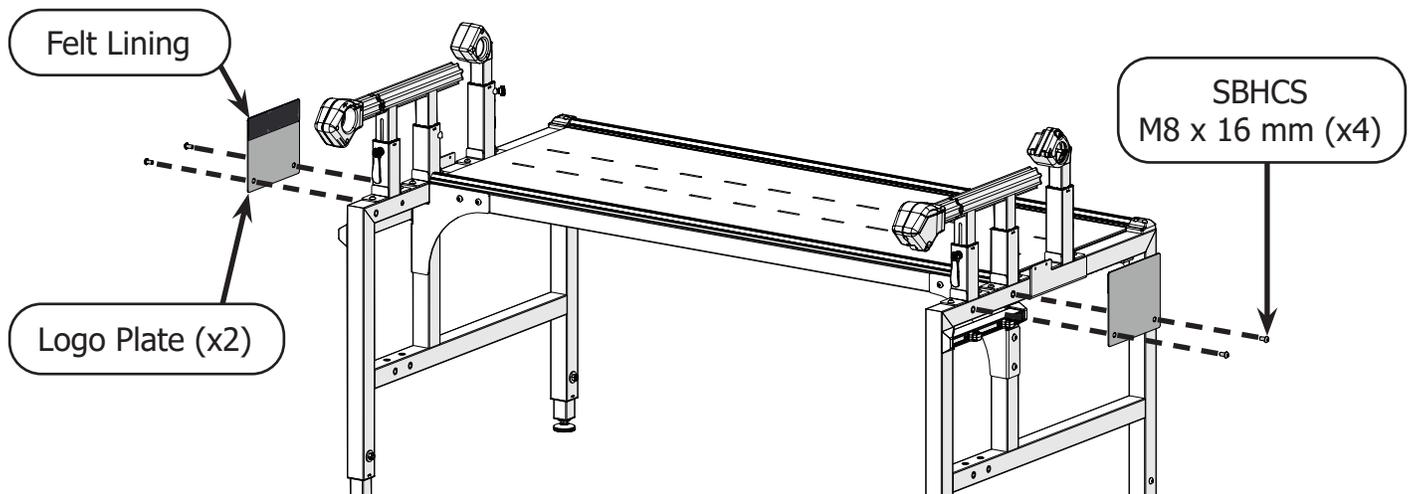


Task 5 - Installing the Side Rails (continued)

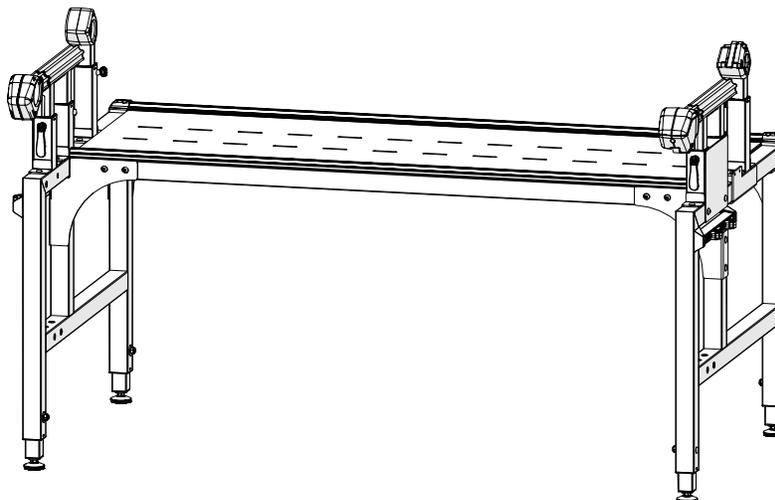
- 3 Place the **left side rail** onto the left side of the frame with the **front rail holder** facing the front of the frame. Attach with four **M8 x 16 mm SBHCS** and the 5 mm Allen wrench.



- 4 Use the 5 mm Allen wrench and four **M8 x 16 mm SBHCS** to attach a **logo plate** to each side of the frame with the **felt lining** facing in towards the frame.



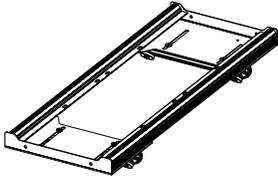
- 5 **Result:** The side rails and logo plates are installed.



Task 6 - Aligning the Tracks

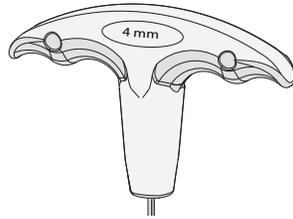
Parts & Tools Needed:

Bottom Carriage



(Box 1)

T-handle Allen
Wrench 4 mm

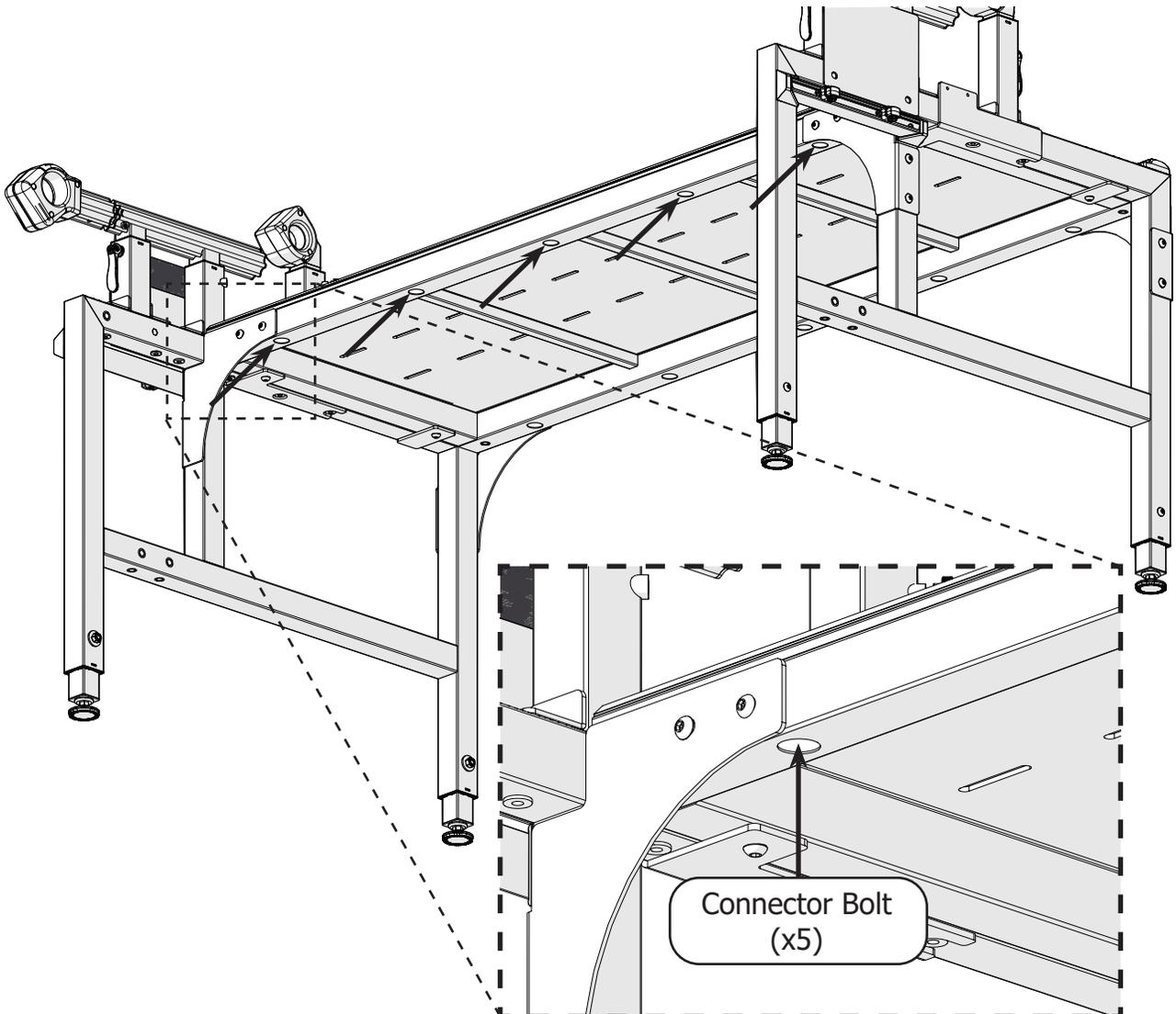


(Box 1: Hardware Box)

Instructions

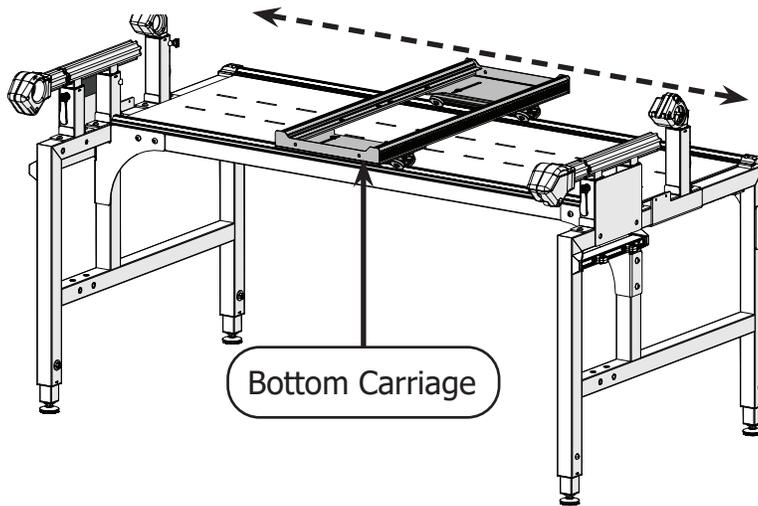
Aligning the tracks will ensure your bottom carriage can ride smoothly across the length of the frame. Take the following steps to align the tracks on your frame:

- 1 Use the 4 mm T-handle Allen wrench to loosen, but not remove, the five **connector bolts** inside the front edge of the table.



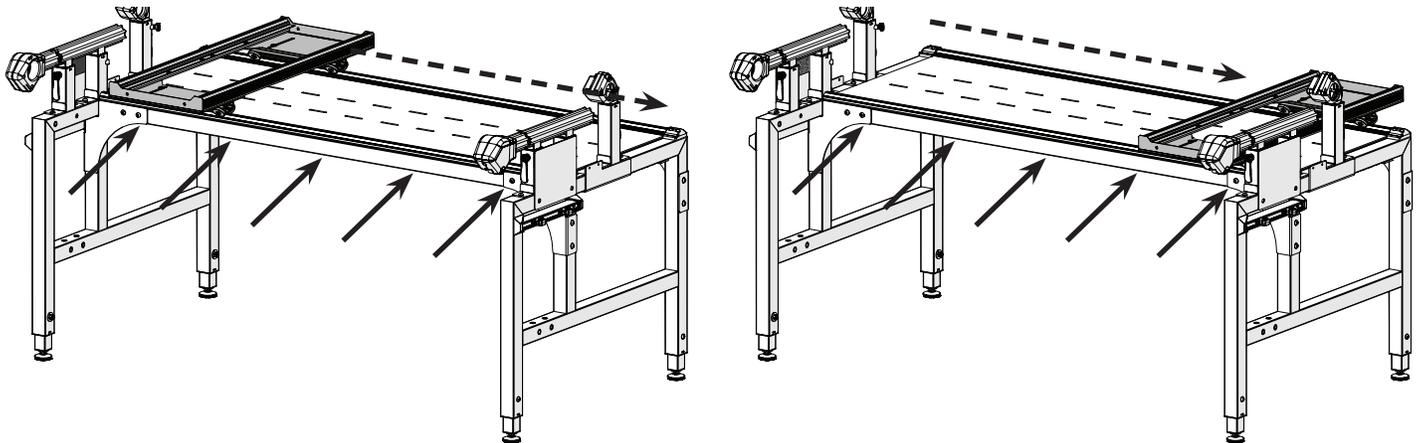
Task 6 - Aligning the Tracks (continued)

- 2 Place the **bottom carriage** on the frame and press it down onto the tracks while rolling it along the entire length of the frame 2-3 times.



Note: Stickers on the carriage end plates identify the front and back of the carriage.

- 3 Slowly roll the bottom carriage across the frame one more time. Pause to tighten each of the connector bolts underneath the front edge of the table as you pass over them.

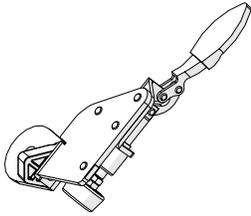


- 4 **Result:** The tracks are aligned for smooth quilting.

Task 7 - Installing the Carriage Channel Lock

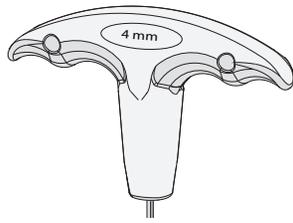
Parts & Tools Needed:

Dual-Wheel
Channel Lock

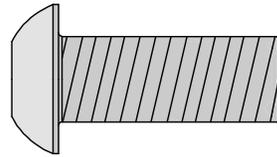


(Box 1: Hardware Box)

T-handle Allen
Wrench 4 mm



SBHCS
M6 x 20 mm

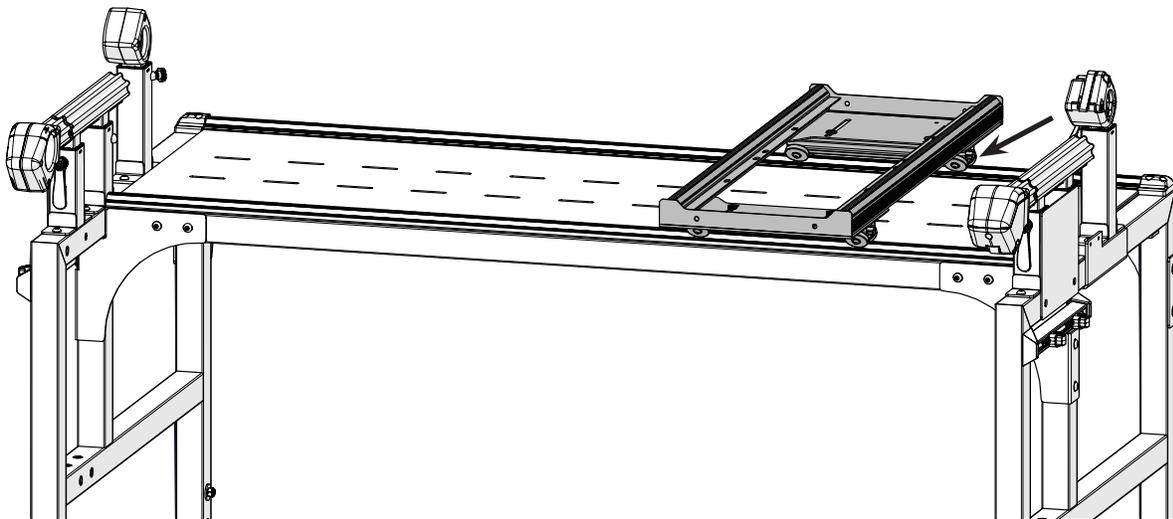


(Box 1: Hardware Box)

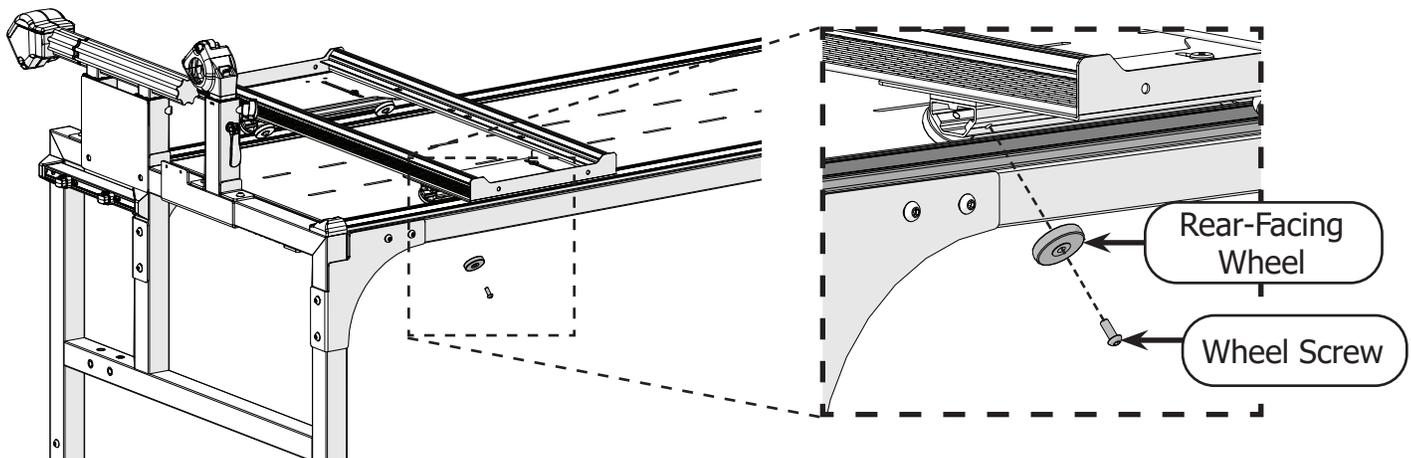
Instructions

Channel locks restrict the movement of the machine along one axis, so that it is easy to create a straight vertical or horizontal line. The carriage channel lock stops the movement of the machine on the side-to-side axis to assist with making vertical lines. Take the following steps to install the carriage channel lock:

- 1 Locate the right rear wheels of the bottom carriage.

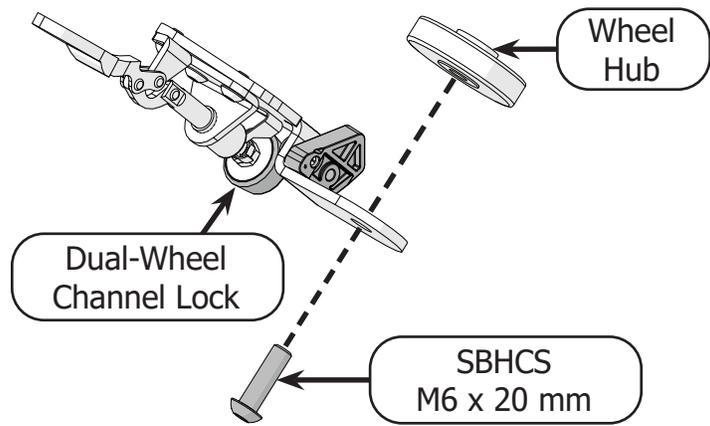


- 2 Use the 4 mm Allen wrench to remove the **wheel screw** and the **rear-facing wheel**. This wheel screw will not be needed again and can be stored with the packaging materials.

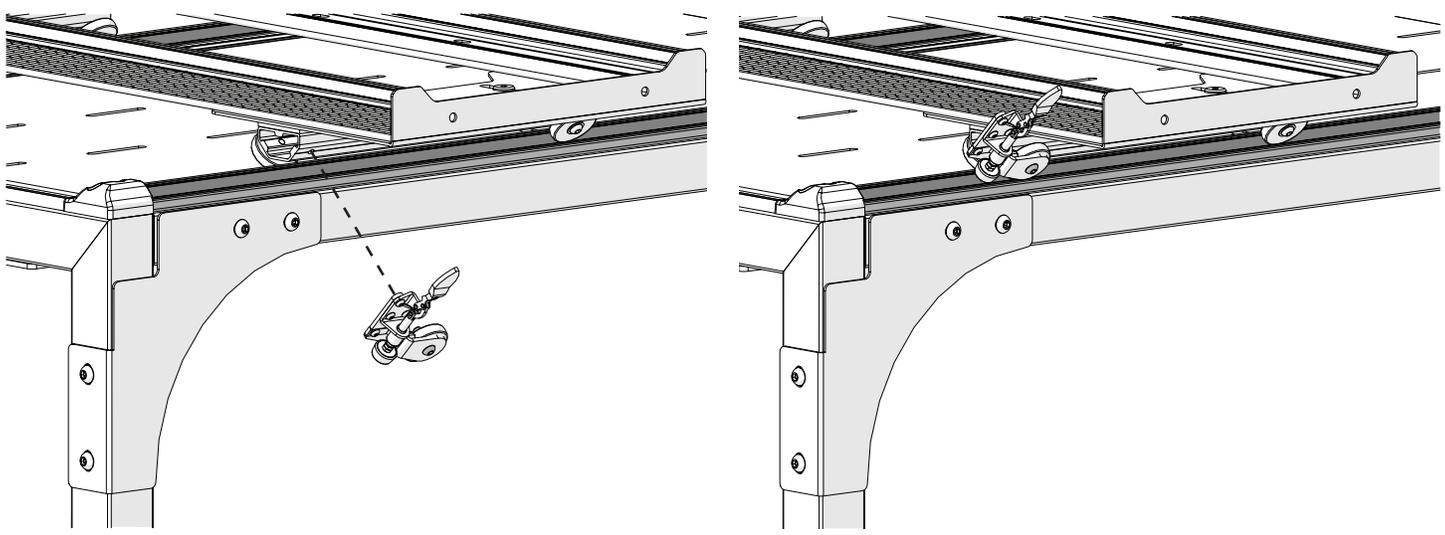


Task 7 - Installing the Carriage Channel Lock (continued)

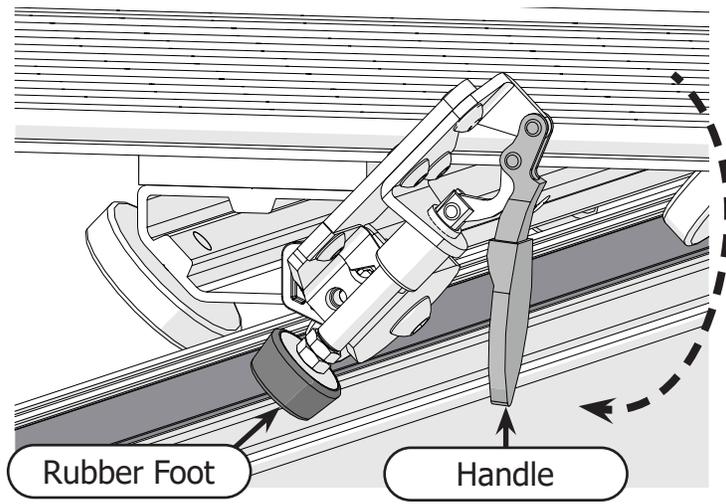
- 3 Place the **dual-wheel channel lock** onto the **M6 x 20 mm SBHCS** followed by the wheel. Place the wheel with the **wheel hub** facing away from the channel lock.



- 4 Screw the channel lock and wheel onto the bottom carriage using the 4 mm Allen wrench.

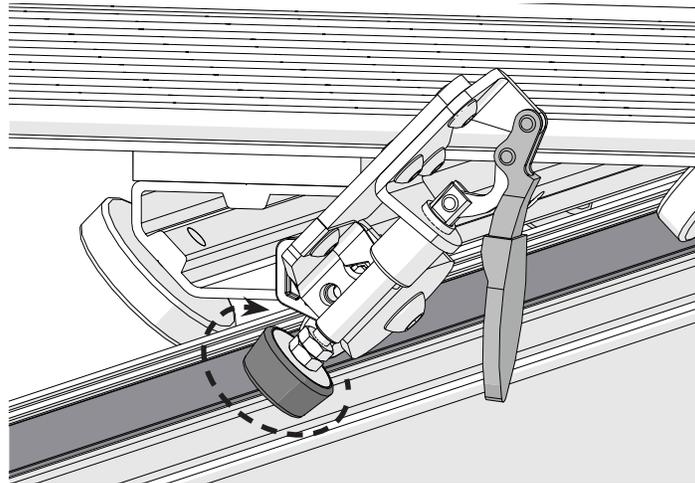


- 5 Test the channel lock by closing the **handle**. The **rubber foot** should press firmly against the frame track and prevent the bottom carriage from sliding across the frame.



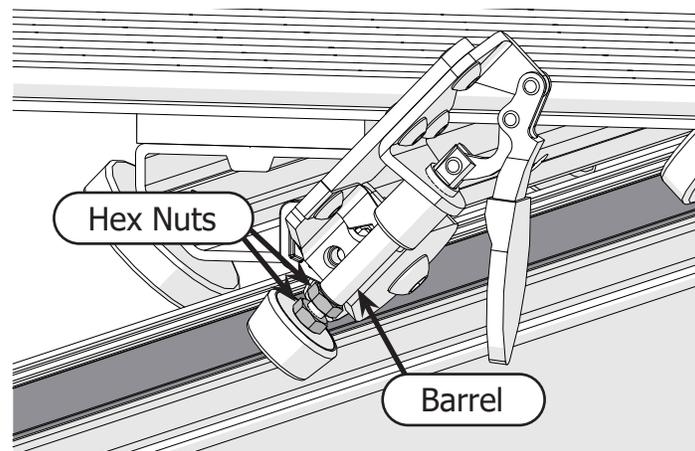
Task 7 - Installing the Carriage Channel Lock (continued)

- 6 If the rubber foot doesn't fully reach the track or its grip on the track seems loose, twist the rubber foot clockwise to extend it.



Note: If twisted too far, the handle will start to open and eventually the foot will fall out. Reverse the direction you're twisting until the handle is pointing down but the foot still reaches the track.

- 7 **Optional Step:** Prevent the channel lock from loosening over time by using needle nose pliers or a wrench to tighten the bottom 4 mm **hex nut** against the rubber foot. Tighten the other hex nut against the channel lock **barrel**.



- 8 **Result:** The channel lock is installed on the bottom carriage and functions properly.

Congratulations! You have completed Part One of the assembly instructions for your frame. Before continuing to Part Two of these instructions, complete any of the following that apply to you:

- **Wheeled quilting machine users:** Complete Part One of your instruction manual and follow the instructions provided at the end of Part One to determine what manual to go to next.
Note: If your machine manual is not broken into parts, complete the following in order:
 1. Install the lower encoder on the machine according to your machine's instruction manual.
 2. Complete Part One of your QuiltMotion manual if you will be setting up the QuiltMotion automation accessory today. Otherwise, skip this step.
 3. Complete the steps to install and adjust your machine wheels according to your machine's instruction manual.
 4. Then complete Part Two of your QuiltMotion manual, if applicable.
- **Top plate and wheel-less sewing/quilting machine users:** assemble the top plate now according to your top plate instruction manual. If you'll be using QuiltMotion, complete Part One and Two of your QuiltMotion manual after assembling your top plate.

Part Two

Before completing the tasks in part two, please ensure you've completed the applicable items listed below.

Progress Checkpoint

Have you:

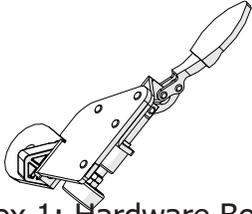
- Installed the lower encoder onto the bottom carriage (machine manual part one) OR assembled your top plate?
(Note: If you've assembled your top plate, skip ahead to Part Three on page 27.)
- Completed Part One of QuiltMotion (optional accessory)
- Aligned your machine wheels (machine manual part two)
- Completed Part Two of QuiltMotion (optional accessory)

Task 8 - Installing the Machine Channel Lock

Parts & Tools Needed:

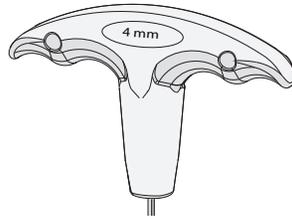
If using a top plate, skip to "Part Three" on page 27.

Dual-Wheel Channel Lock

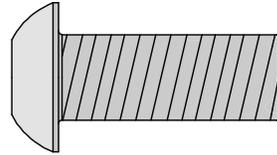


(Box 1: Hardware Box)

T-handle Allen Wrench 4 mm



SBHCS M6 x 20 mm



(Box 1: Hardware Box)

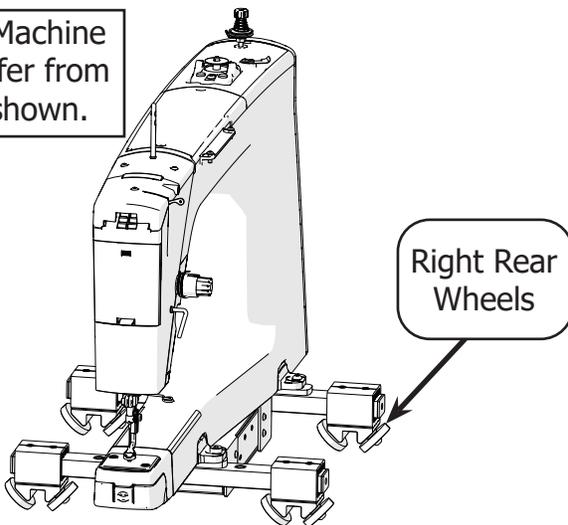
For instructions on using the channel locks, see page 66.

Instructions

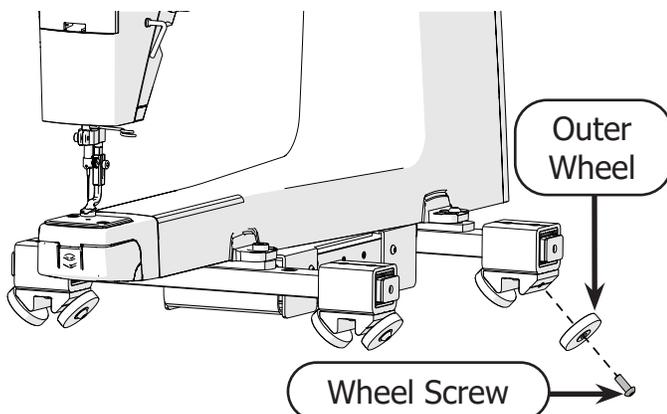
Channel locks restrict the movement of the machine or bottom carriage along one axis, so that it is easy to create a straight line. This channel lock is installed on the machine and stops the movement of the machine along the front-to-back axis to assist with making horizontal lines.

- 1 Locate the machine's **right rear wheels**.

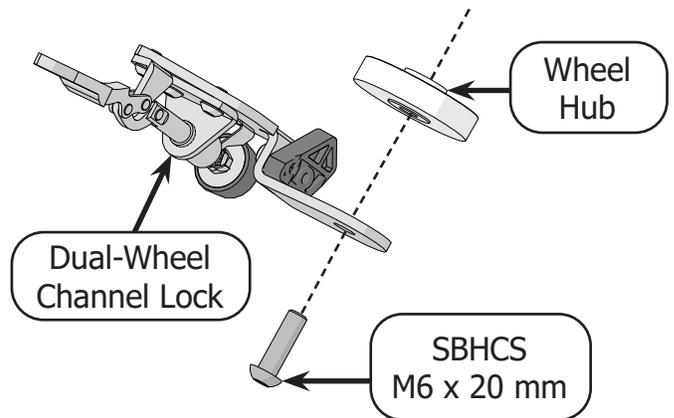
Note: Machine may differ from model shown.



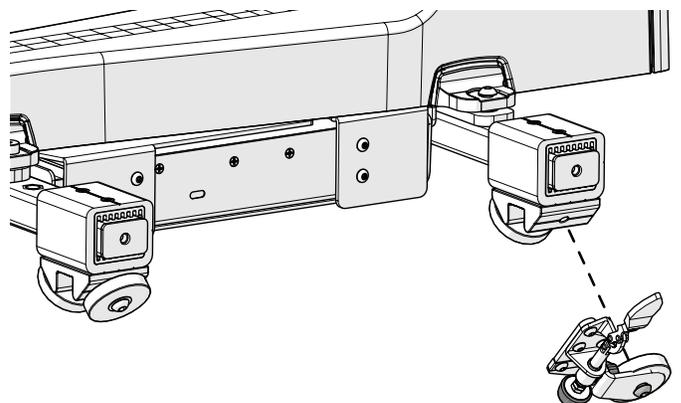
- 2 Use a 4 mm Allen wrench to remove the **outside wheel** and **wheel screw**. The wheel screw will not be needed again and can be stored with the packaging materials.



- 3 Place the **dual-wheel channel lock** onto the **M6 x 20 mm SBHCS**. Follow it with the wheel, with the **wheel hub** facing away from the channel lock.

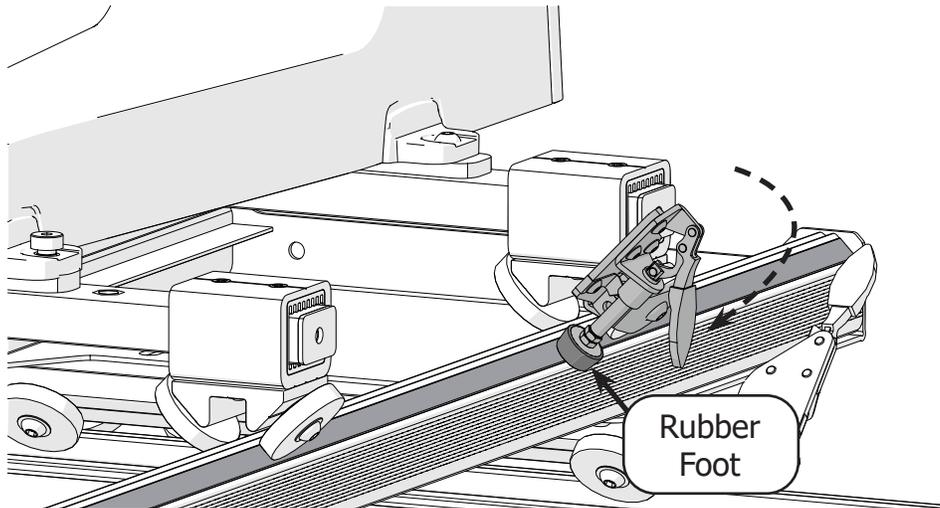


- 4 Screw the channel lock and wheel onto the machine so the channel lock body is toward the front of the machine. Use a 4 mm Allen wrench to attach.

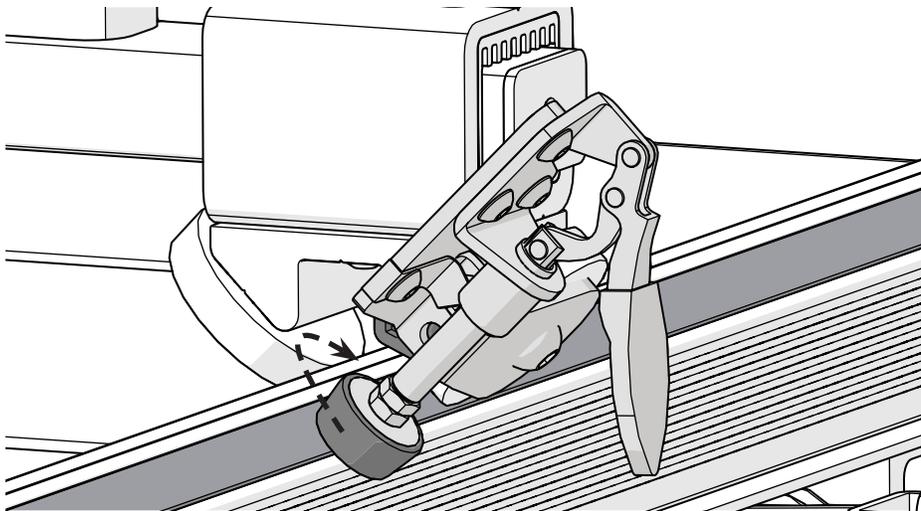


Task 8 - Installing the Machine Channel Lock (continued)

- 5 Close the channel lock handle and test it out. The **rubber foot** should press firmly against the bottom carriage tracks and prevent the machine from moving front-to-back on the carriage.

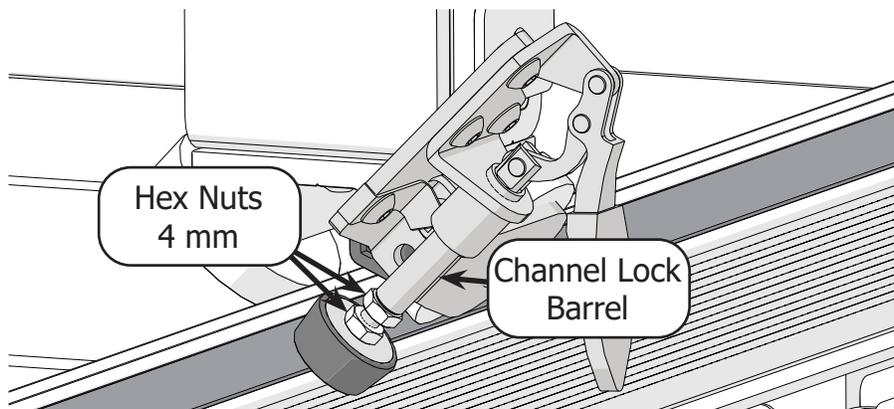


- 6 If the channel lock doesn't fully reach the track, or its grip on the track seems loose, twist the rubber foot clockwise to extend it.



Note: If twisted too far, the handle will start to open, and eventually the foot will fall out. Reverse the direction you're twisting until the handle is pointing down, but the foot still reaches the track.

- 7 **Optional step:** Prevent the channel lock from loosening over time by using needle nose pliers or a wrench to tighten the bottom **4 mm hex nut** against the rubber foot. Tighten the other hex nut against the **channel lock barrel**.



- 8 **Result:** The channel lock is installed on the machine and functions properly.

Congratulations! You have completed Part Two of the assembly instructions for your frame. Before continuing to Part Three of these instructions, complete any of the following that apply to you:

- **Wheeled quilting machine users:** Complete Part Three of your instruction manual.
Note: If your machine manual is not broken into parts, complete the following in order:
 1. Install the machine wheel covers.
 2. Install the handlebars (applicable machines only).
 3. Install the display.
 4. Install the thread stand (applicable machines only).
 5. Install the upper encoder onto the machine.
 6. Plug in the machine.
 7. Wind a bobbin and thread the machine.

Part Three

Before completing the tasks in part three, complete part three of your machine manual.

Progress Checkpoint

Wheeled quilting machine users:

Have you:

- Completed Part Three of your machine instruction manual:
 - Installed wheel covers (applicable machines only)?
 - Installed handlebars (applicable machines only)?
 - Installed display (applicable machines only)?
 - Installed thread mast (applicable machines only)?
 - Installed upper encoder (applicable machines only)?

Top Plate Users:

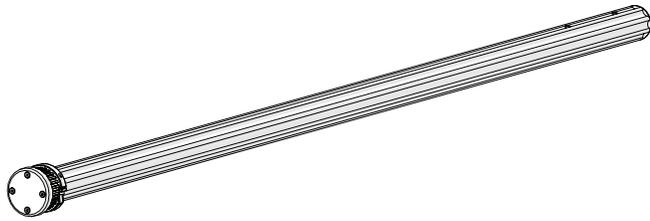
Have you:

- Assembled your top plate?
- Installed the channel lock on the top plate?
- Installed and secured your sewing machine on the top plate?

Task 9 - Installing the Rails

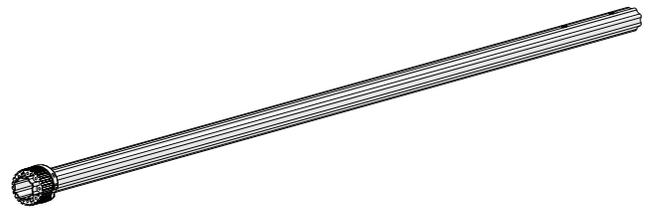
Parts & Tools Needed:

Front Rail Assembly



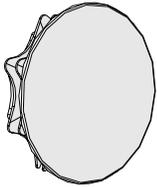
(Box 2)

Take-Up Rail Assembly



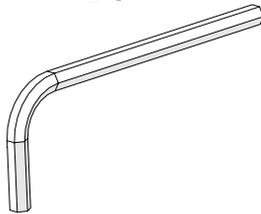
(Box 3)

Front Rail Tube Cap



(Box 1: Hardware Box)

Allen Wrench
2.5 mm

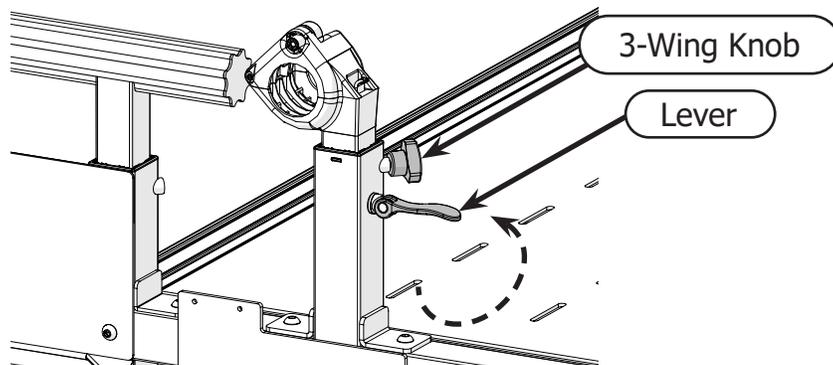


(Box 1: Hardware Box)

Instructions

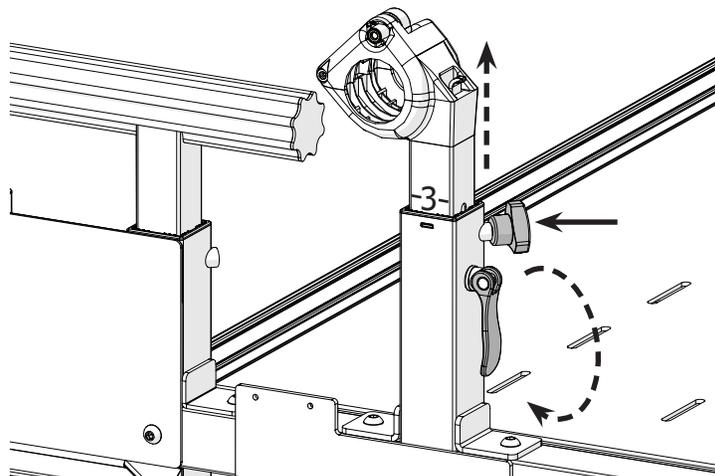
These rails, along with the side rails, form the hoop that holds your fabric on the frame. Take the following steps to install the rails onto the frame.

- 1 The take-up rail holders will need to be raised so the take-up rail can fit in the throat of your machine. To raise a take-up rail holder, loosen the **3-wing knob** and raise the **lever** on the back of the rail holder.

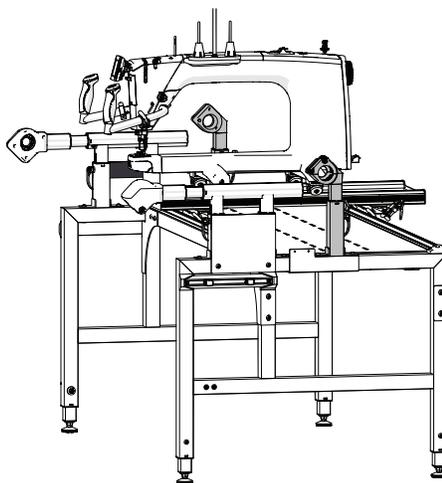


Task 9 - Installing the Rails (continued)

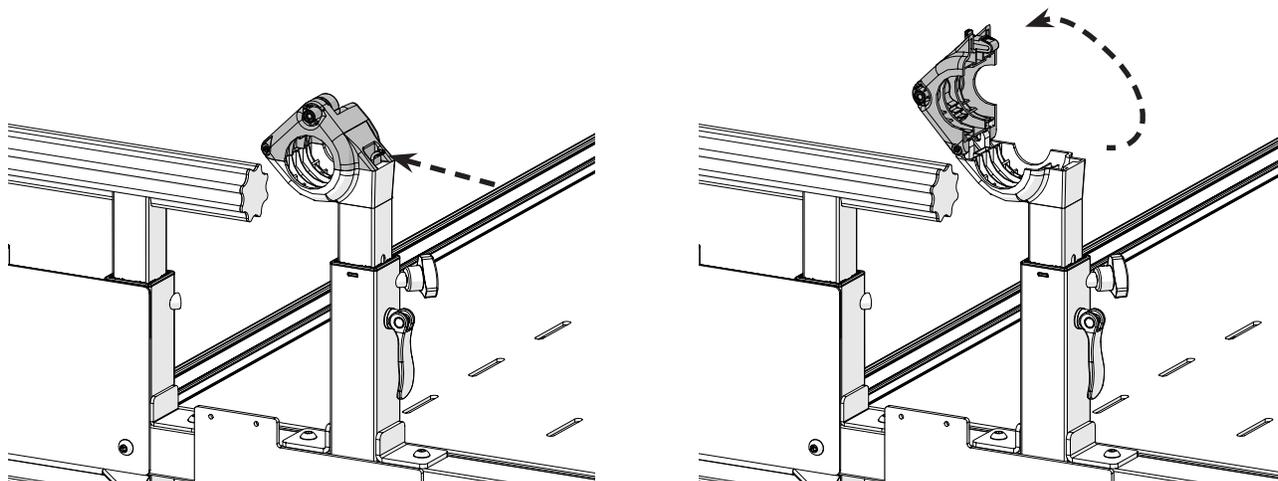
- 2 Raise the take-up rail holder until you can see the number **three**. Secure in place by closing the lever and tightening the 3-wing knob.



- 3 Repeat steps 1-2 for the other take-up rail holder and raise it to the same level.

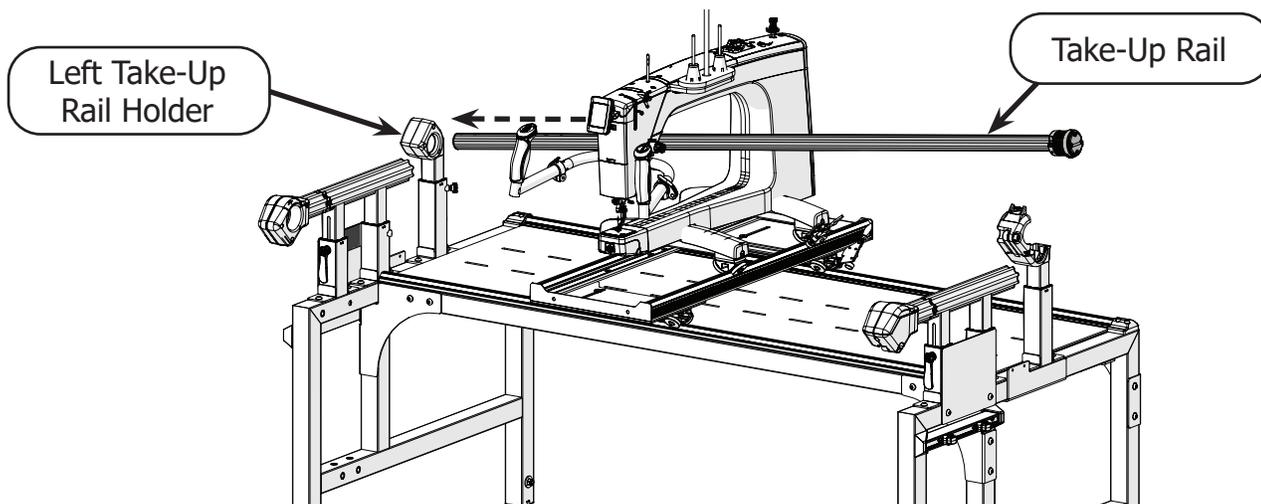


- 4 Open the right take-up rail holder by pressing on the tab on the back and lifting up.

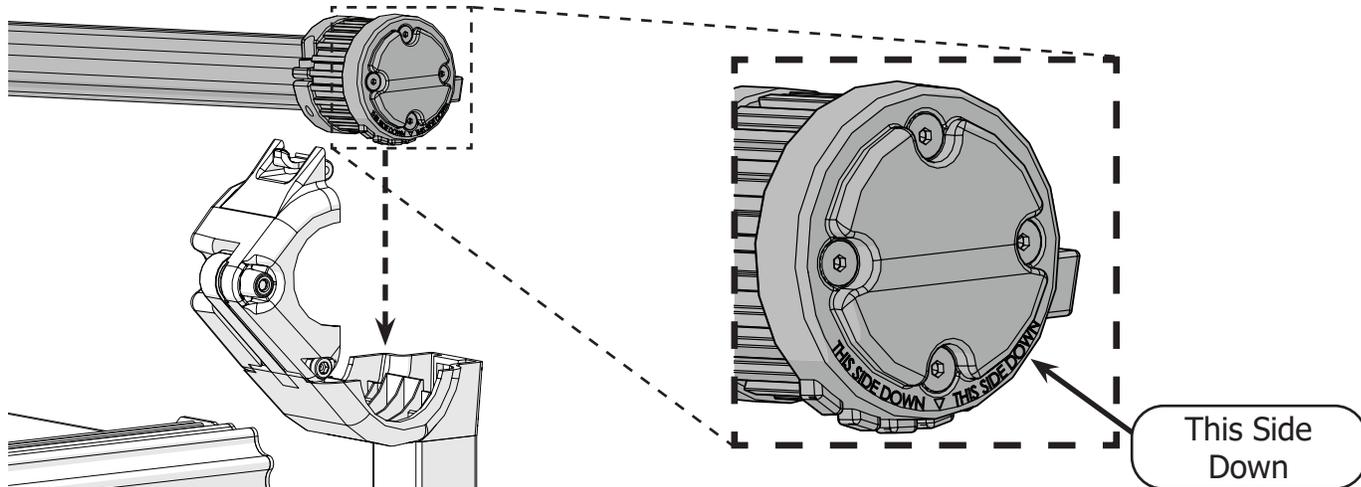


Task 9 - Installing the Rails (continued)

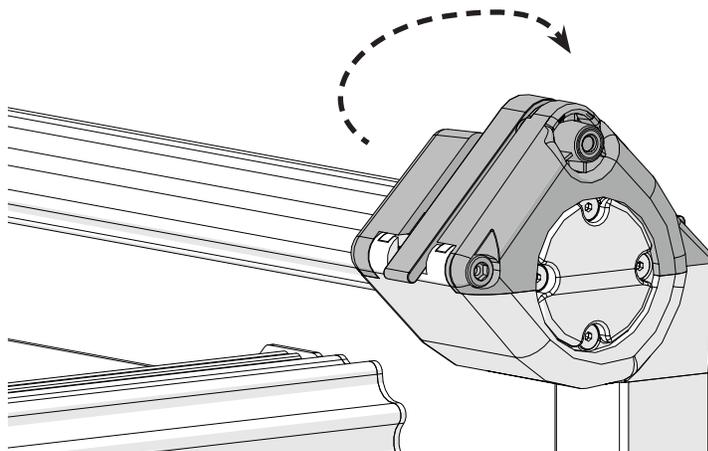
- 5 Place the **take-up rail** (the smaller rail) through the throat of your machine and insert the small end of the rail into the opening in the **left take-up rail holder**.



- 6 Place the large end of the take-up rail in the right take-up rail holder. Make sure to have the side marked "**this side down**" pointing down.

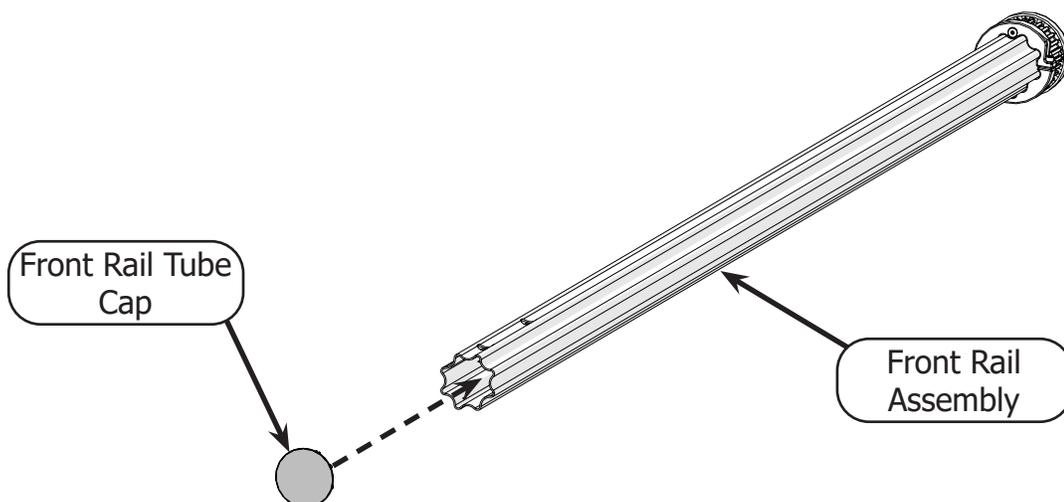


- 7 Close the take-up rail holder.

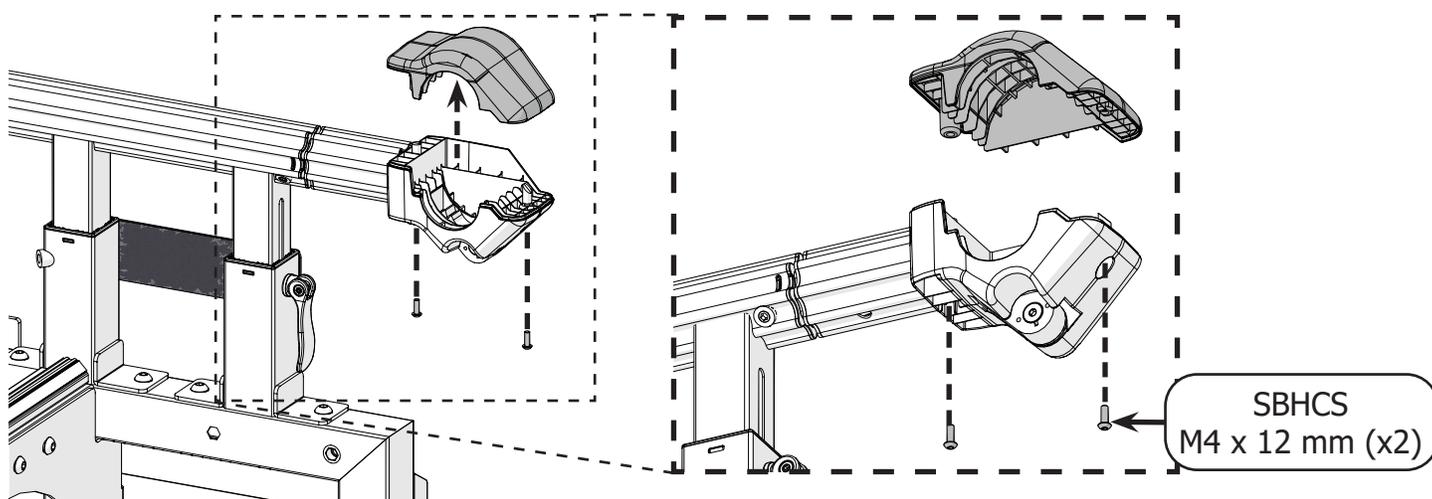


Task 9 - Installing the Rails (continued)

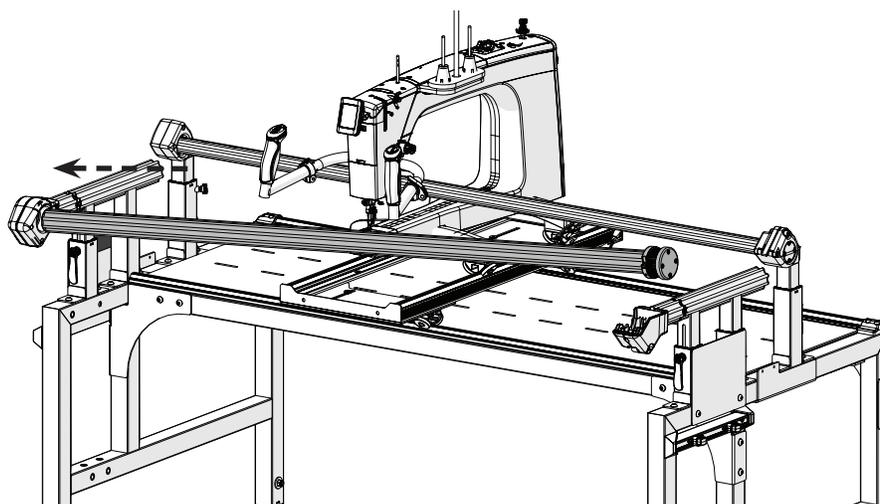
- 8 Press the **front rail tube cap** into the open end of the **front rail assembly**, which is the larger of the two rails.



- 9 Use the 2.5 mm Allen wrench to remove the two **M4 x 12 mm SBHCS** from the bottom of the right front rail holder and then lift the top of the holder.

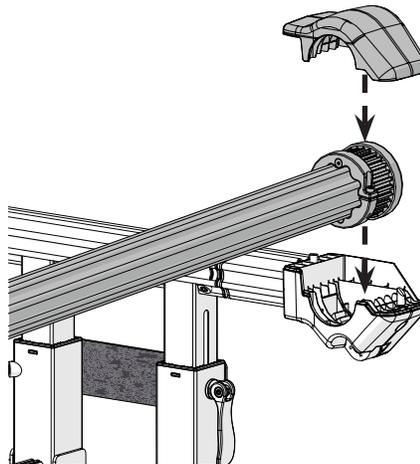


- 10 Insert the small end of the front rail into the opening in the left front rail holder.

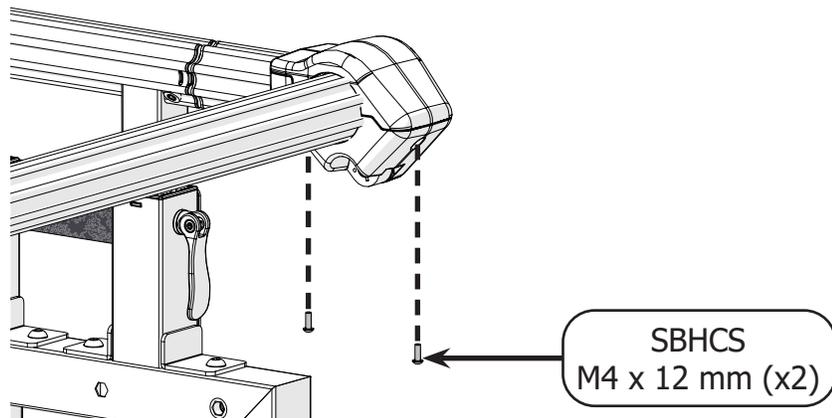


Task 9 - Installing the Rails (continued)

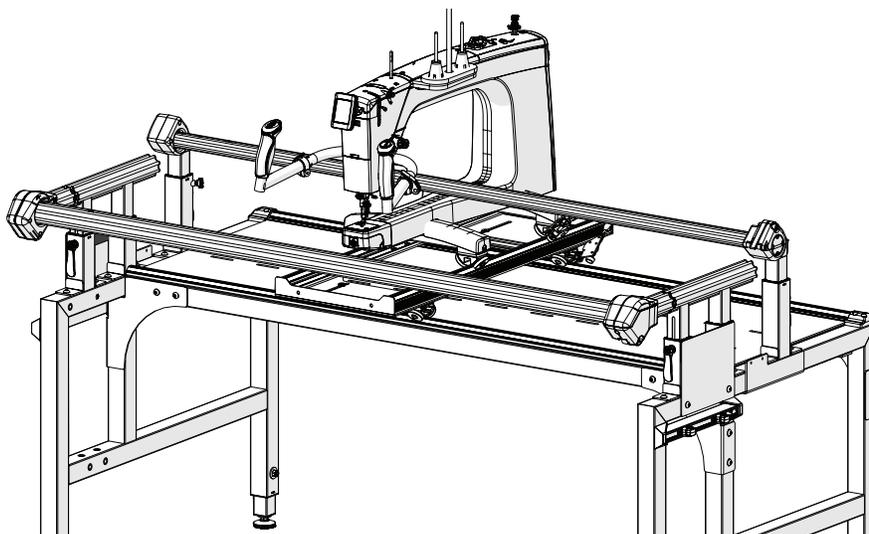
- 11 Place the large end of the front rail into the right front rail holder and replace the top of the holder.



- 12 Use the 2.5 mm Allen wrench to replace the two **M4 x 12 mm SBHCS** in the rail holder to secure the rail in place.



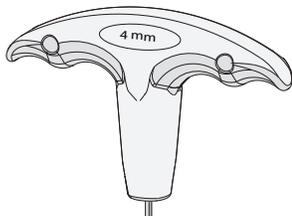
- 13 **Result:** The take-up rail and front rail are installed.



Task 10 - Positioning the Rails

Parts & Tools Needed:

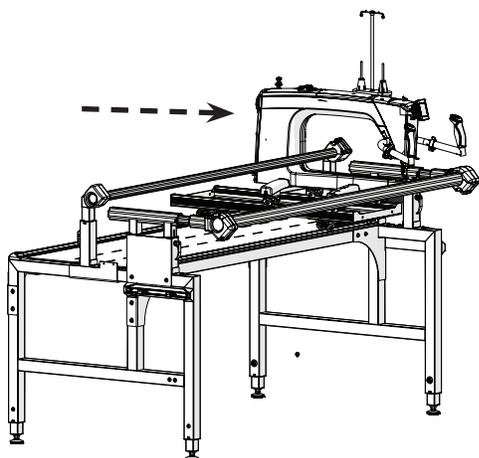
T-handle Allen
Wrench 4 mm



Front Rail Adjustment

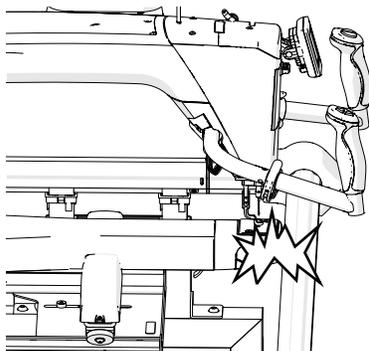
The rails can be adjusted to accommodate different sizes of machines as well as to correctly hold your fabric as you progress on your quilt. Take the following steps to adjust the front rail to accommodate your machine:

- 1 Move the machine as far forward as it will go on the right side of the frame.

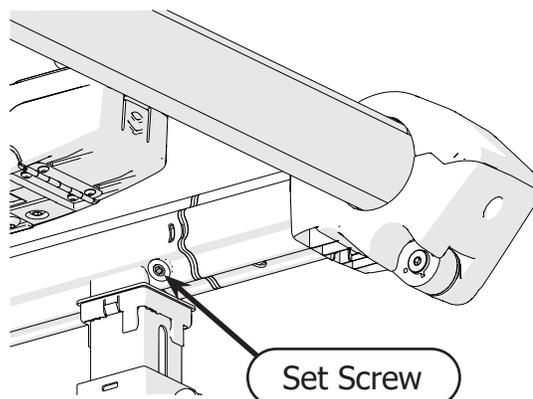


- 2 If your machine does not collide with the front rail, you do not need to extend the rail. Continue to step 9.

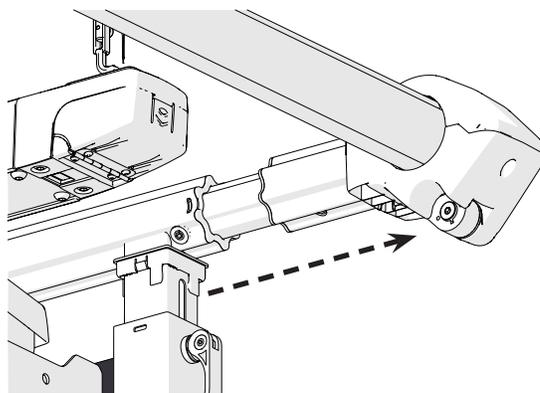
If your machine does hit the front rail, continue on to step 3 to extend the rail.



- 3 Use the 4 mm Allen wrench to loosen the **set screw** on the inside of the right side rail.

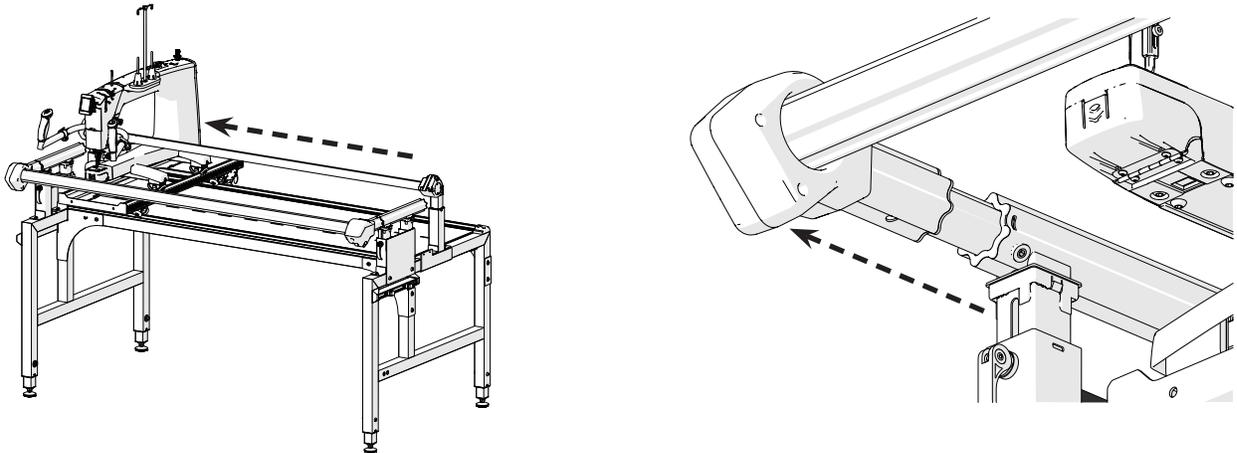


- 4 Pull the rail out until you can move the machine all the way forward and not hit the rail.

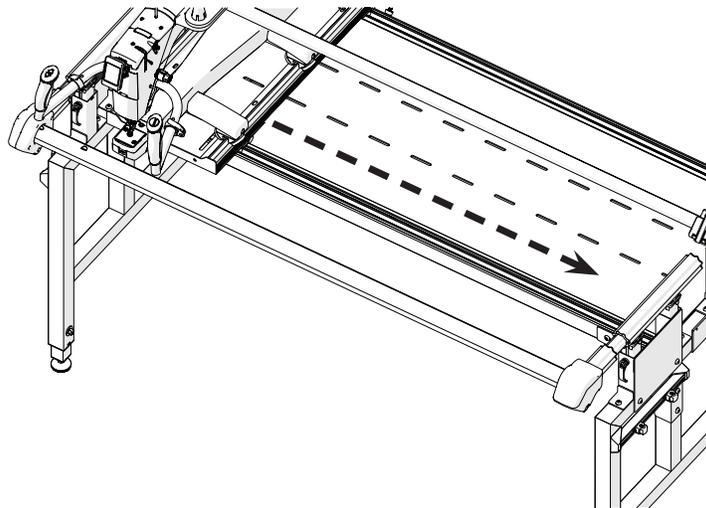


Task 10 - Positioning the Rails (continued)

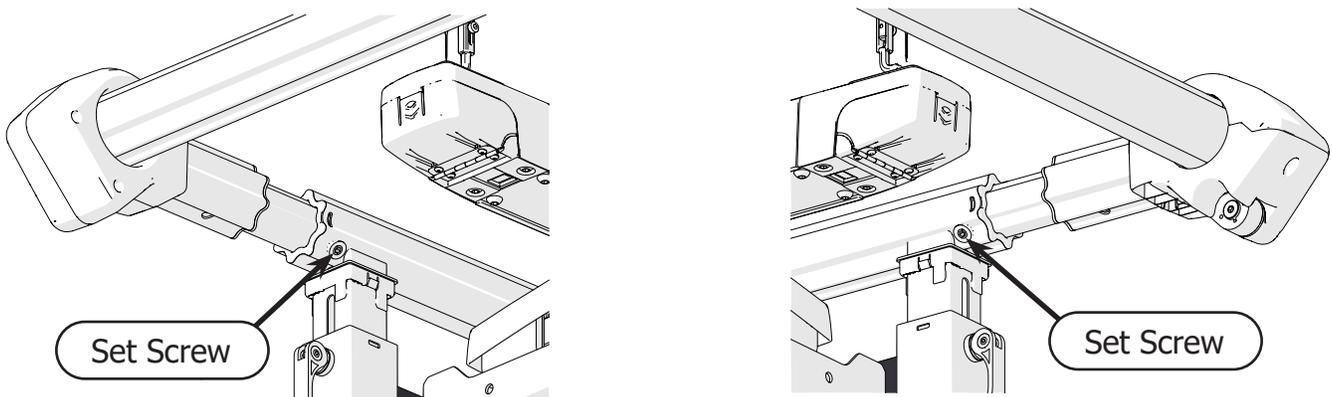
- 5 Move the machine to the left side of the frame and repeat steps 3-4 on the left side.



- 6 Pull the machine forward and move it along the frame to make sure the front rail is straight and the same distance from the front of the machine on both ends of the frame.



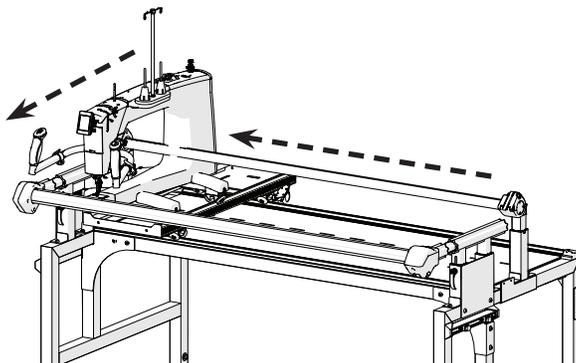
- 7 Re-tighten the **set screws** with the 4 mm Allen wrench.



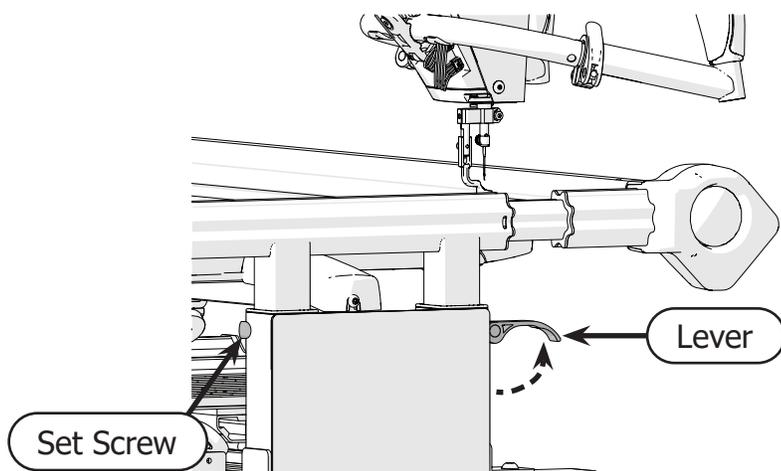
- 8 **Result:** The front rail is pulled far enough forward to accommodate the throat length of your machine.

Task 10 - Positioning the Rails (continued)

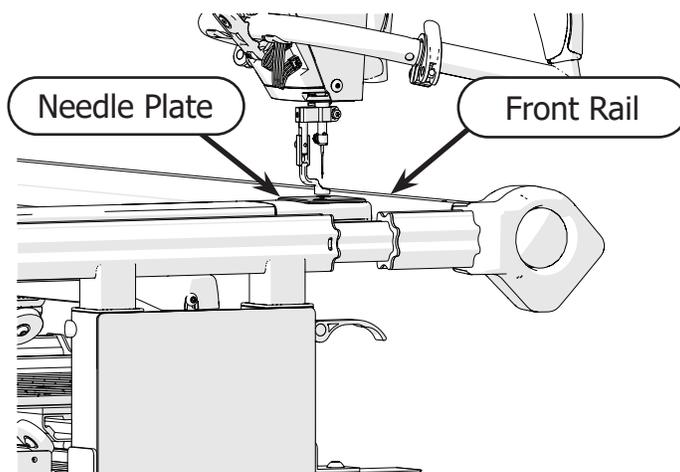
- 9 Move your machine to the left side of the frame and pull it as far forward as you can.



- 10 Lift the **lever** on the front of the side rail and use the 4 mm Allen wrench to loosen the **set screw** on the back of the side rail.

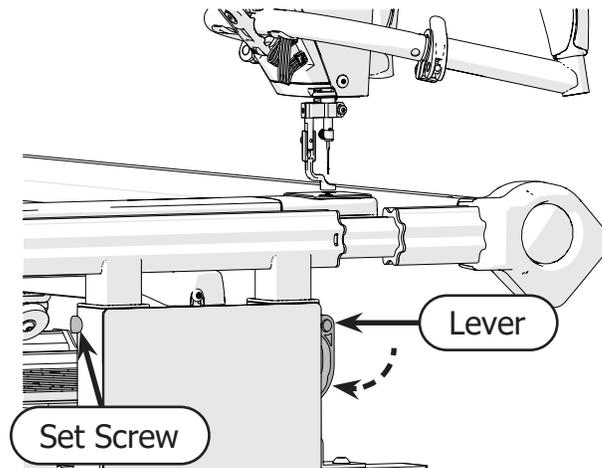


- 11 Adjust the height of the side rail until the top of the **front rail** is even with the **needle plate** on the machine.

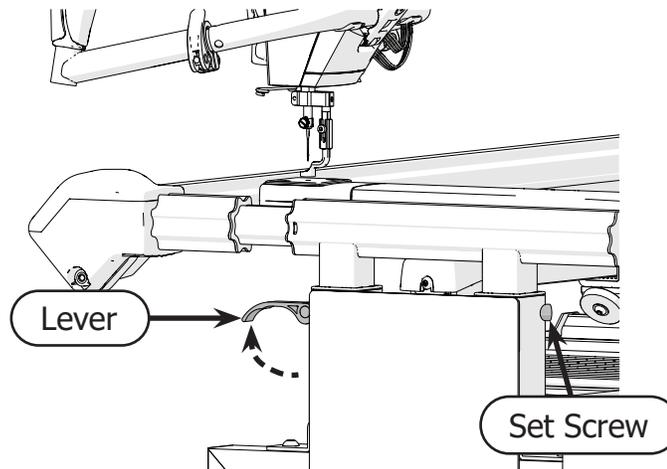


Task 10 - Positioning the Rails (continued)

- 12 Close the **lever** and then tighten the **set screw** with the 4 mm Allen wrench.



- 13 Move the machine to the right side of the machine and pull it all the way forward. Repeat steps 10-12 with the right side rail.

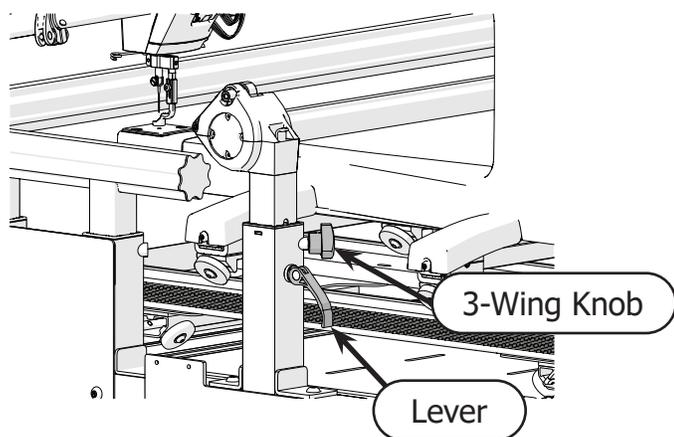


- 14 **Result:** The top of the front rail is even with the needle plate on the machine.

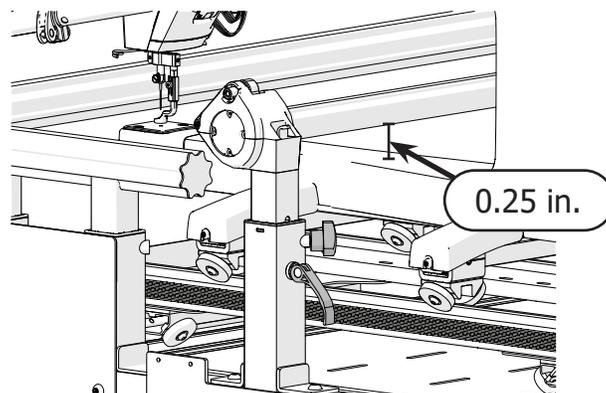
Take-up Rail Adjustment

Take the following steps to adjust the take-up rail to accommodate your machine:

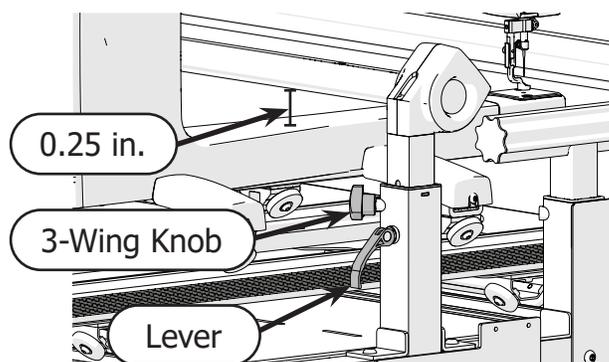
- 1 Loosen the **lever** and **3-wing knob** on the take-up rail holder.



- 2 Adjust the take-up rail height until there is about **one quarter-inch** of space between the take-up rail and the bed of the machine. Tighten the lever and 3-wing knob when finished.



- 3 Move the machine to the other side of the frame and repeat steps 1-2 with that take-up rail holder.



- 4 **Result:** The take-up rail is about a quarter-inch above the bed of the machine.

Task 11 - Installing the Bungee Clamps

Parts & Tools Needed:

Bungee Clamps
(4 pack)

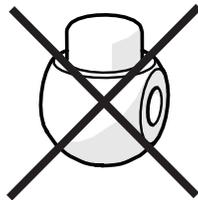


(Box 1: Hardware Box)

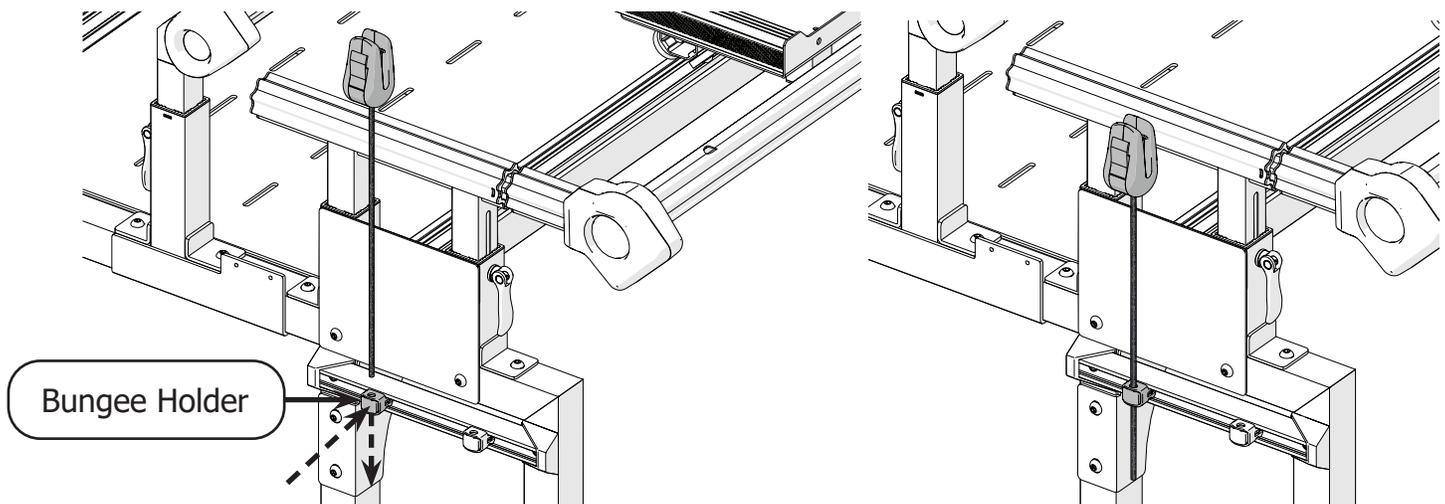
Instructions

The bungee clamps can help keep the side of your fabric straight and tight when it does not reach all the way to the side of your frame. Take the following steps to install the bungee clamps.

- 1 The bungee stops that come with the bungees will not be needed. They can be stored with your packaging materials or discarded.

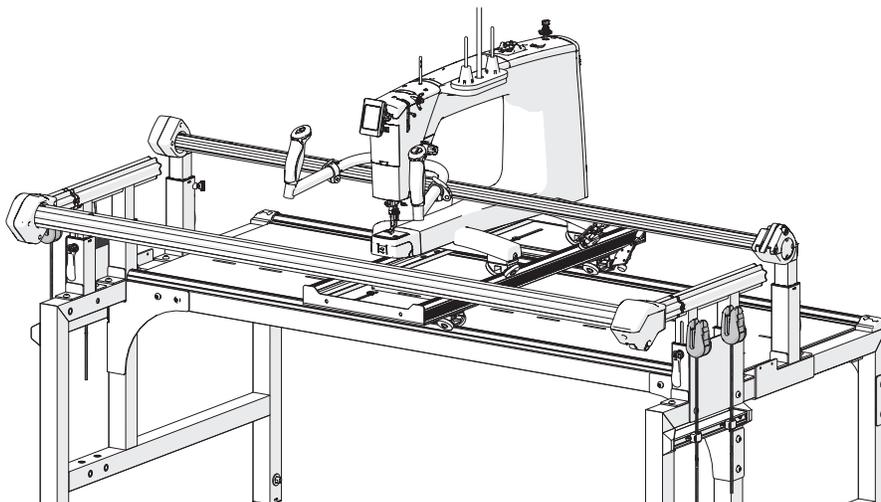


- 2 Press the button on one of the **bungee holders** on the side of the frame to open it and slide the end of the bungee into the holder.



Task 11 - Installing the Bungee Clamps (continued)

- 3 Repeat steps 1-3 with the other three bungee clamps in the other three bungee holders. We'll go over how to use the bungee clamps when attaching the fabric to the frame.



- 4 **Result:** The bungee cables have been installed and can be used to stabilize and smooth out the edges of the quilt.

Task 12 - Leveling the Frame

Tip: For the best quilting experience in the future, test and re-level your frame every six months and any time the frame is moved.

Parts & Tools Needed:

Open End Wrench
14 mm and 17 mm

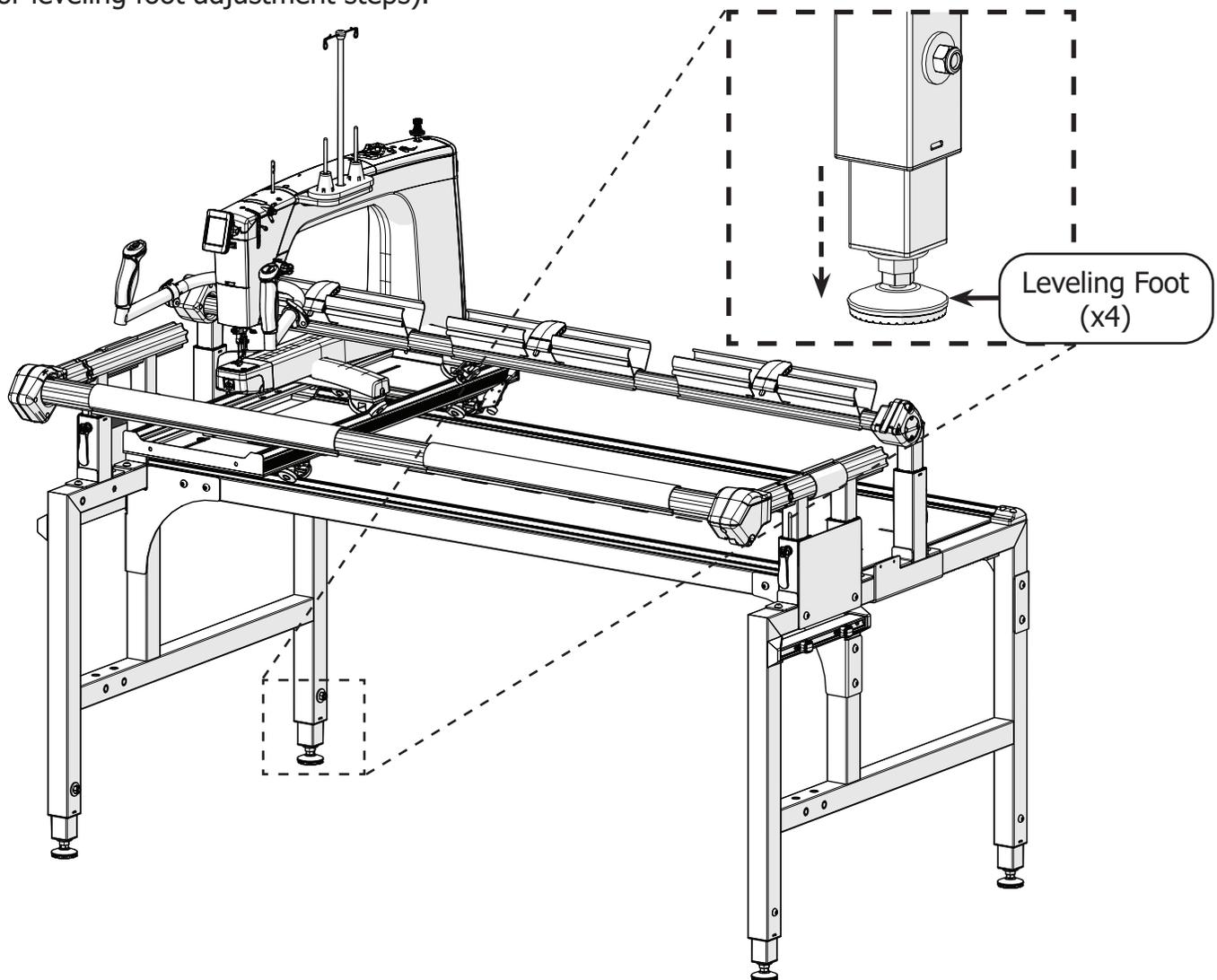


(Box 1: Hardware Box)

Instructions

Not all floors are even, and you don't want your machine running away from you while you're quilting! Take the following steps to level your frame:

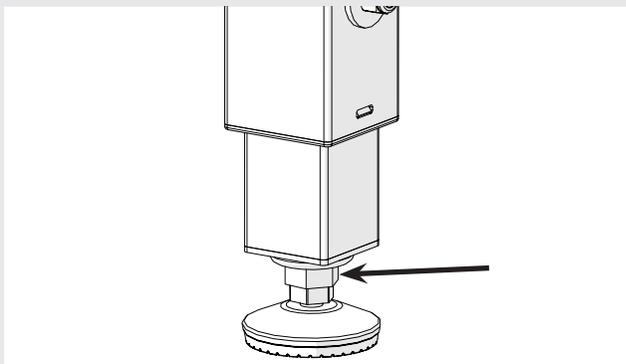
- 1 Begin by lowering the four leveling feet of the frame as far as they will go (see next page for leveling foot adjustment steps).



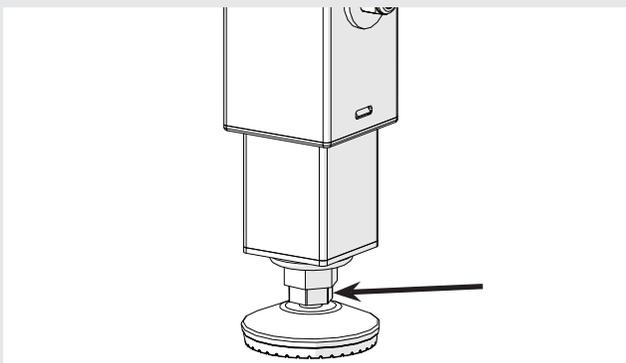
Task 12 - Leveling the Frame (continued)

Leveling Foot Adjustment

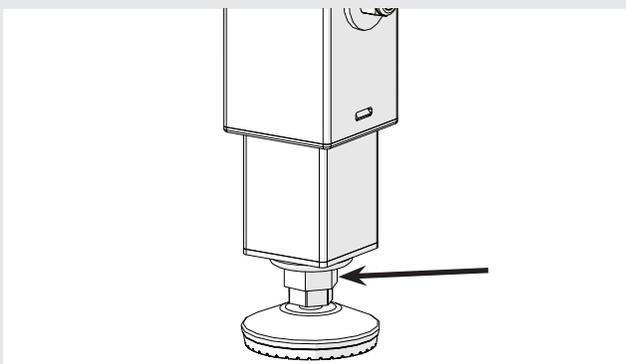
- a Loosen the top nut on the leveling foot with the 17 mm Open-end wrench by rotating it clockwise.



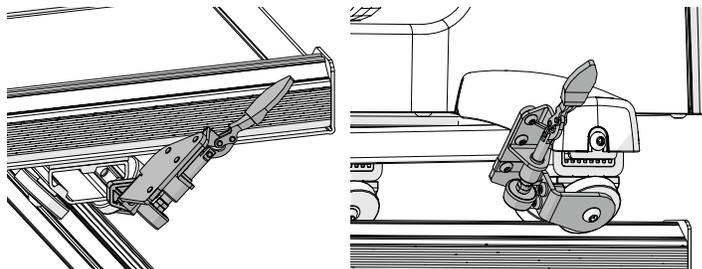
- b Turn the bottom nut with the 14 mm Open-end wrench until the desired height is set. Turn counter-clockwise to lower the frame. Turn clockwise to raise the frame.



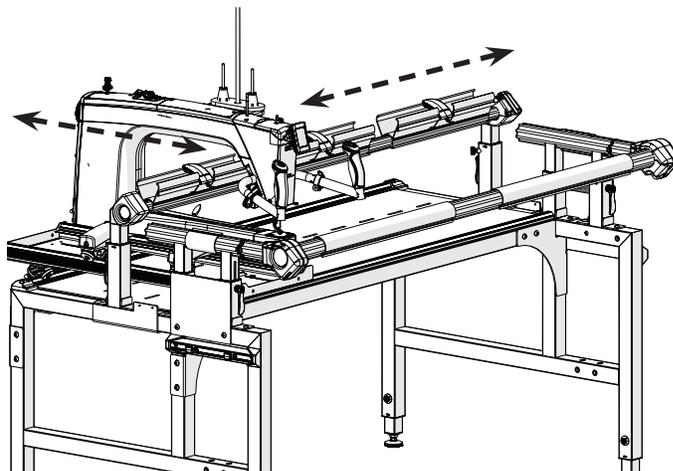
- c Tighten the top nut with the 17 mm Open-end wrench until it is firm against the frame leg.



- 2 After lowering the frame, make sure both channel locks are open so the machine and bottom carriage can roll freely.



- 3 Move the machine to the left side of the frame and place the machine in the middle of the bottom carriage. Let go of the machine to see if it rolls and in which direction.

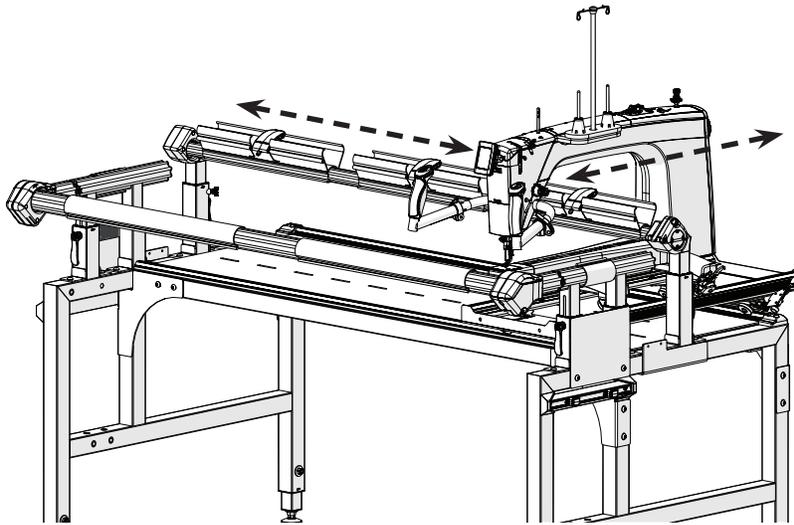


- If the machine rolls towards the right side of the frame, raise the feet on the right leg.
- If it rolls towards the front, raise the front foot it rolls toward.
- If it rolls towards the rear, raise the rear foot it rolls toward.

Note: Due to the weight of the machine, some slight movement is normal. The goal is to prevent the machine from rolling across the frame.

Task 12 - Leveling the Frame (continued)

- 4 Repeat the process with machine on the right side of the frame.

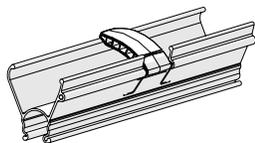


- 5 **Result:** The frame is level and the machine will not roll away while quilting.

Task 13 - Attach the Fabric Clamps

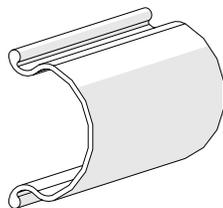
Parts & Tools Needed:

Take-Up Rail
Clamp (x3)



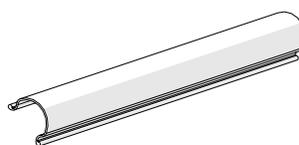
(Box 3)

Side Rail Clamp (x2)



(Box 3)

Front Rail Clamp (x2)

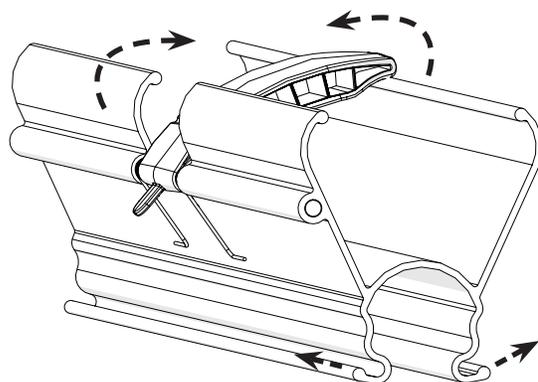
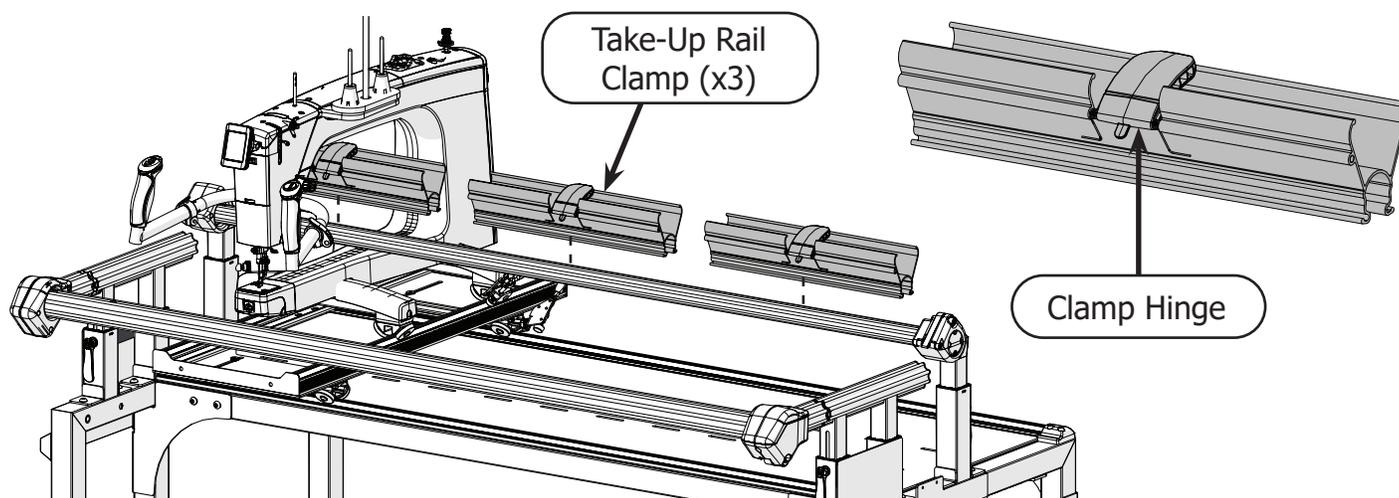


(Box 2)

Instructions

The fabric clamps attach the fabric to the rails and help keep it tight and straight while you are quilting. Take the following steps to attach the clamps to the frame.

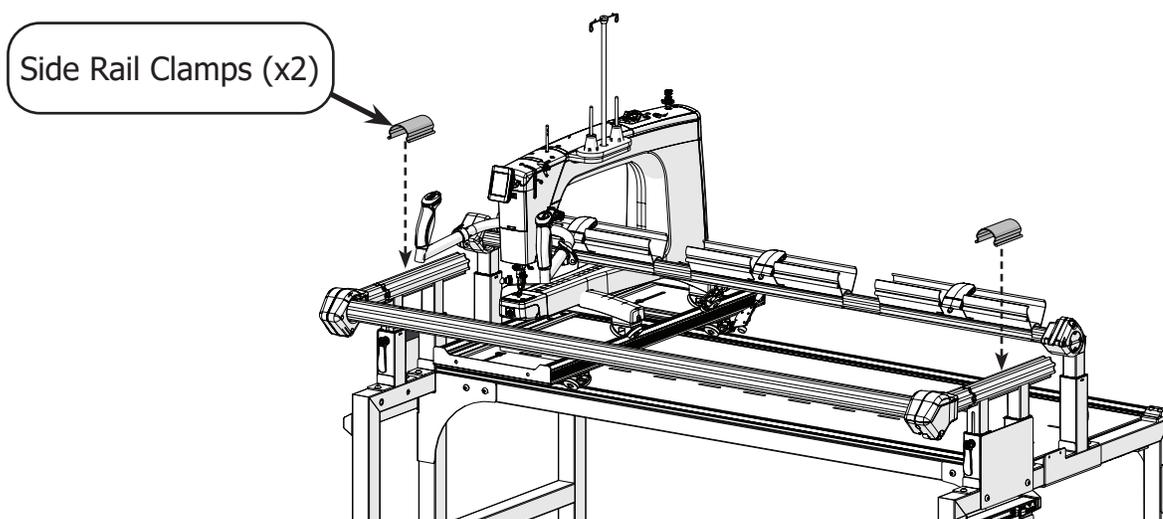
- 1 Attach the three **take-up rail clamps** to the take-up rail with the **hinge for the clamp** facing the front of the frame.



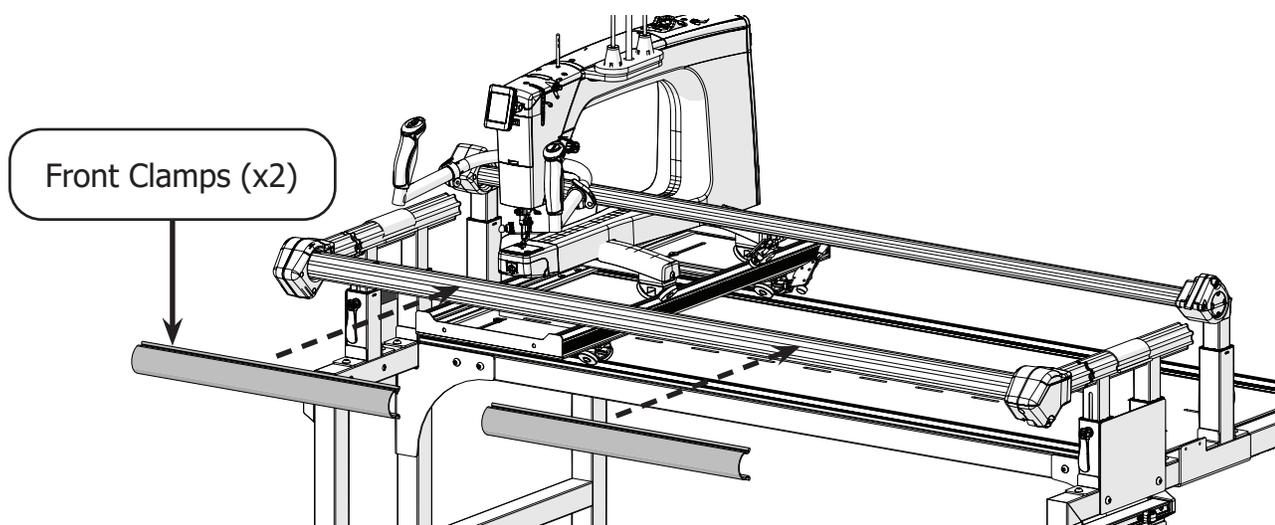
Note: Pinch the top wings of the clamp together to open the clamp wide enough to snap onto the take-up rail.

Task 13 - Attach the Fabric Clamps (continued)

- 2 Press the two **side rail clamps** down onto the two side rails.



- 3 Press the two **front clamps** to the front of the front rail.



- 4 **Result:** The fabric clamps are installed on the rails.

Congratulations! You have completed Part Three of the assembly instructions for your frame. Before continuing to Part Four of these instructions, complete any of the following that apply to you:

- QuiltMotion Part Three.

Part Four

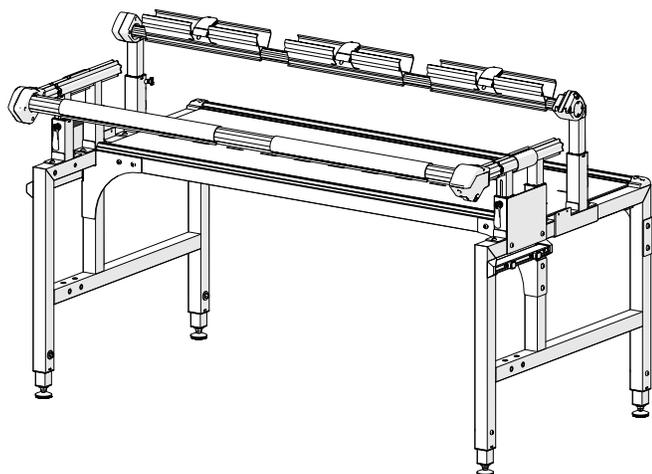
Progress Checkpoint

Have you:

- Completed Part Three of QuiltMotion (optional)

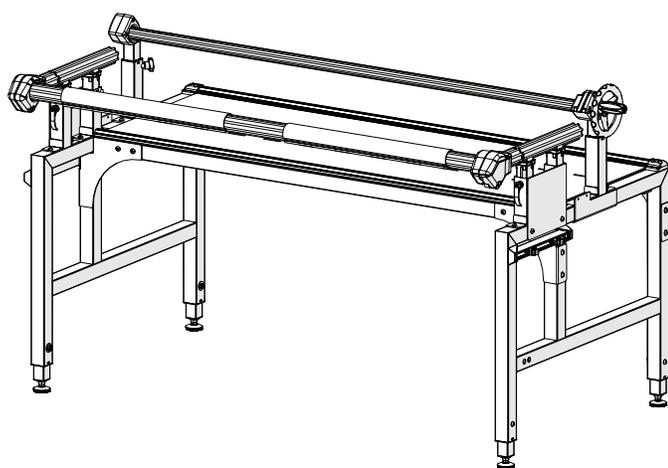
Choose Your Frame Setup

The process for making your quilt sandwich and moving the fabric on the frame is different for the hoop setup than for the rolling setup. Choose which setup you are going to use and turn to the indicated page number to continue. You can easily switch to the other setup style later as needed.



Ideal for quilts more than four feet wide

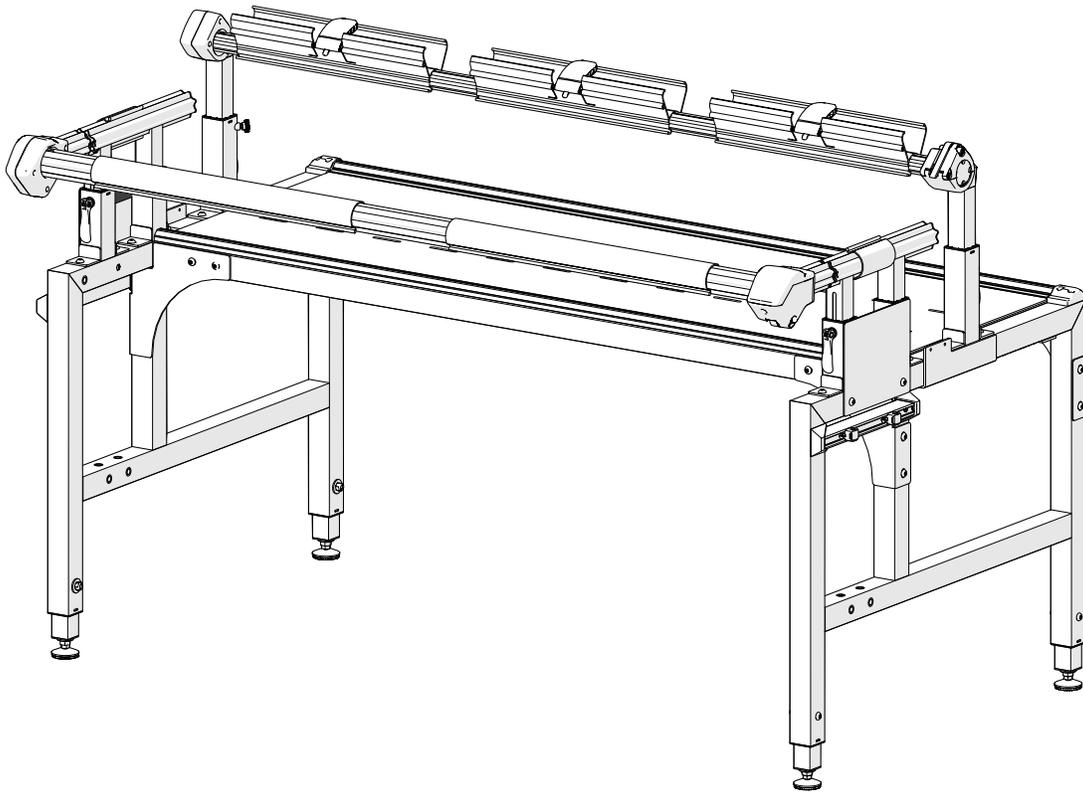
Use as Hoop Setup
Turn to page 48



Ideal for quilts less than four feet wide

Use as Rolling Setup
Turn to page 73

Hoop-Frame Setup

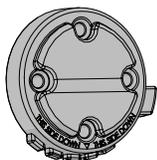


If you just finished assembling your frame for the first time, it is already set up as a hoop frame. Skip "Convert to a Hoop" and go to "Building Your Quilt Sandwich" on "Building Your Quilt Sandwich" on page 51.

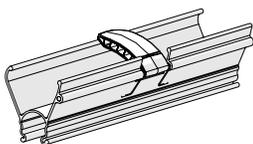
Convert to a Hoop Frame

Parts & Tools Needed:

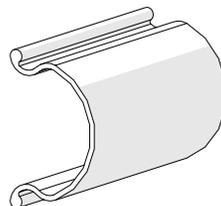
Hoop Take-Up
Rail Cap



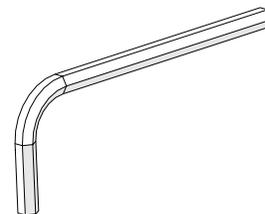
Take-Up Rail
Clamp (x3)



Side Rail Clamp (x2)

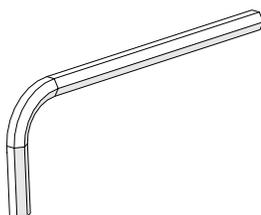


Allen Wrench
6 mm



(Box 1: Hardware Box)

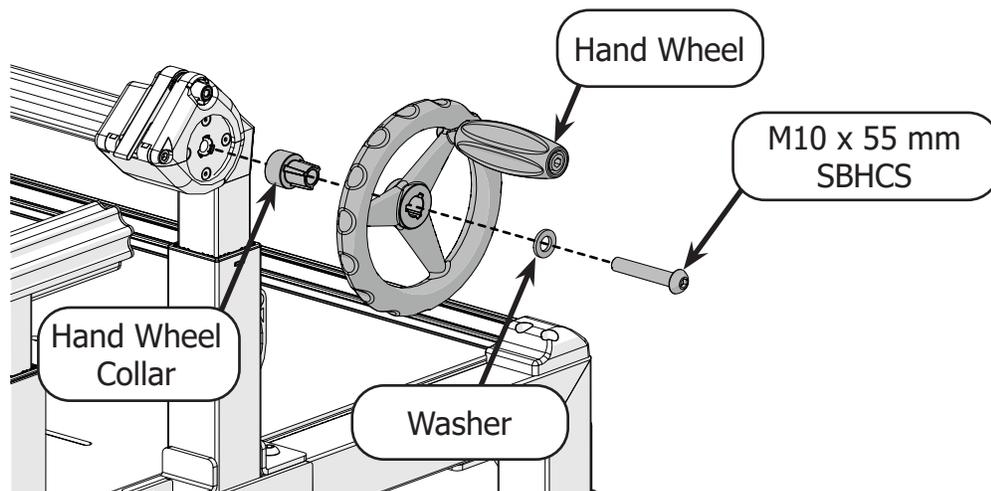
Allen Wrench
2.5 mm



Instructions

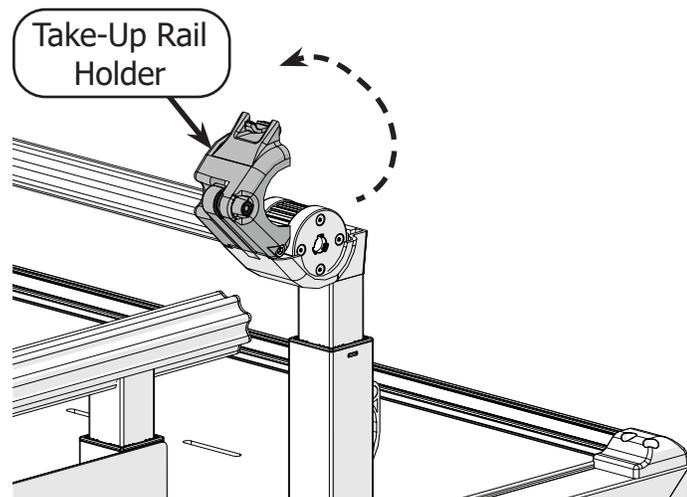
If your frame is currently in the rolling setup, you may need to change it to the hoop-frame setup to accommodate a larger quilt (see page 90 to determine if this is needed). Take the following steps to convert the frame to the hoop-frame setup:

- 1 Remove the **hand wheel**, **hand wheel collar**, **washer**, and **M10 x 55 mm SBHCS** with the 6 mm Allen wrench.

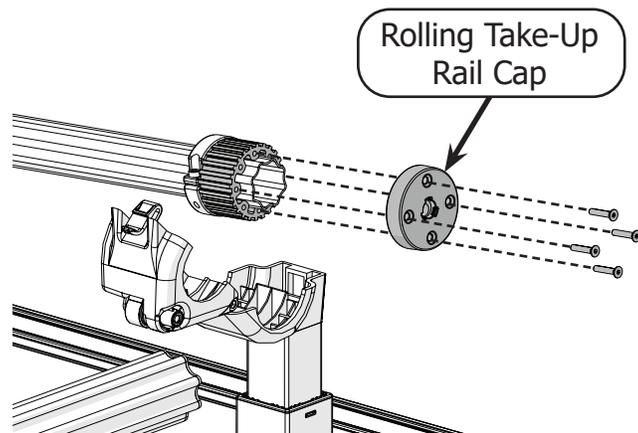


Convert to a Hoop Frame (continued)

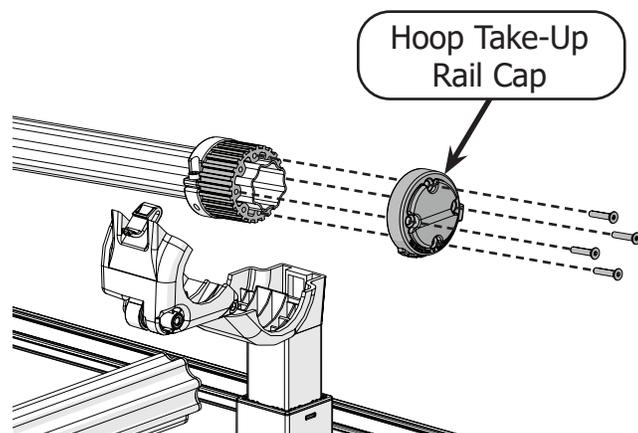
- 2 Open the right **take-up rail holder**.



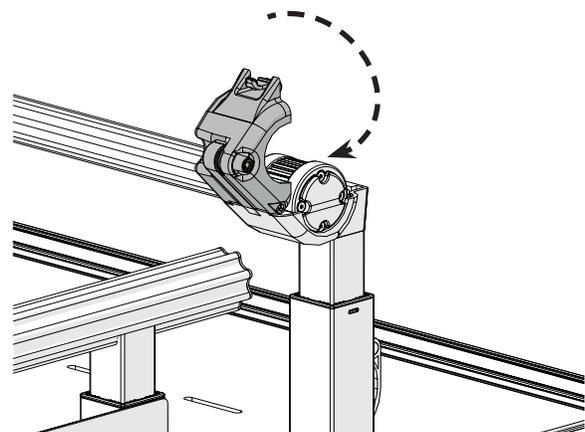
- 3 Lift the take-up rail and use the 2.5 mm Allen wrench to remove the **rolling take-up rail cap** from the end of the rail.



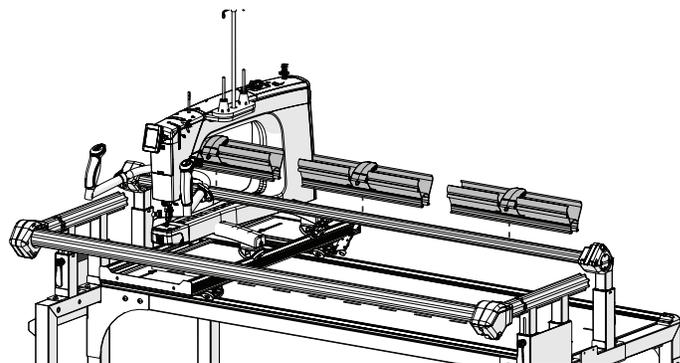
- 4 Use the 2.5 mm Allen wrench to install the **hoop take-up rail cap** to the end of the rail.



- 5 Place the rail back into the holder and close the rail holder.



- 6 Attach the **clamps** to the rails.

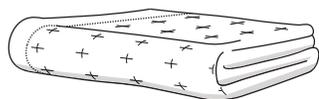


- 7 **Result:** The frame has been converted from the rolling setup to the hoop setup.

Building Your Quilt Sandwich

Parts & Tools Needed:

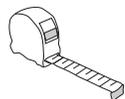
Cloth Leader
Set



(Box 3)



Fabric Marking Pencil
or Chalk (not included)



Measuring Tape
or Ruler (not included)



Pins
(not included)

Tip: The fabric dimensions described are ideal for quilts larger than the frame's hoop. Smaller quilts may benefit from different dimensions. See page 67 for details.

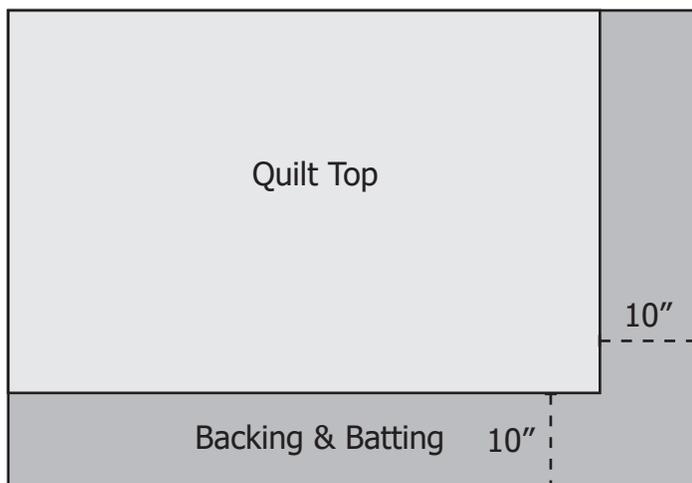
Instructions

The backing and batting help position the quilt top so that it is within reach of the machine on the frame. Take the following steps to cut out the batting and backing, and make a quilt sandwich:

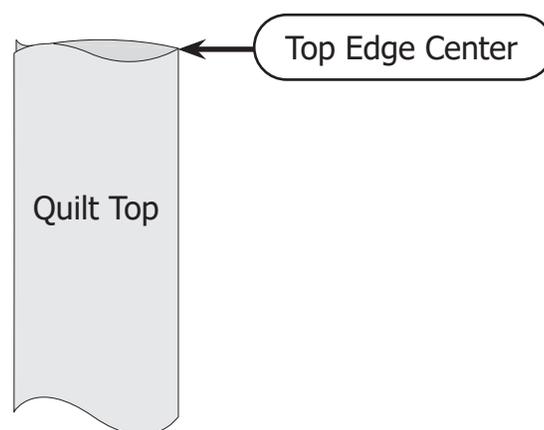
Right Side/Wrong Side: Some fabrics have a front side that has a print or other qualities that the back side does not have, or may look washed out on the back. The front of the fabric is called the "right side." The side that looks washed out or doesn't have the print/texture is called the "wrong side."

Scrim Side: The scrim side is a structural layer on some types of batting. It often feels coarse or pimpled, while the other side feels smooth or "puffy."

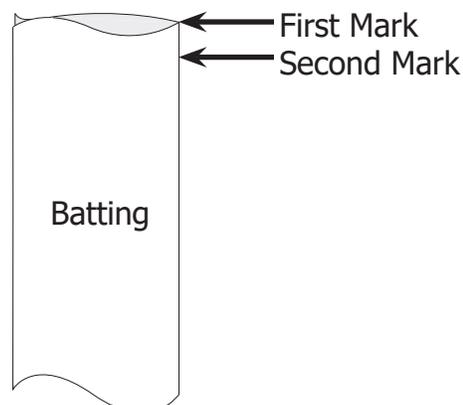
- 1 Cut out backing fabric and batting that to be 10" longer and wider than your quilt top.



- 2 Fold your **quilt top** in half and mark the **center of the top edge** with a pin or marker.

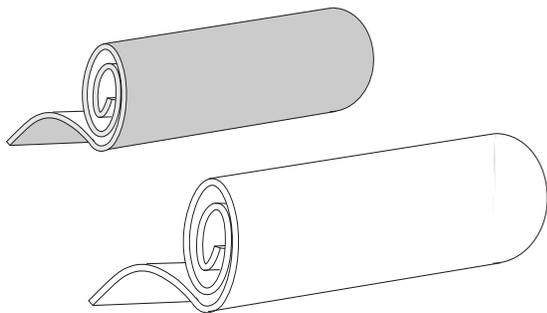


- 3 Fold the **batting** in half and mark the center of the top edge with a pin or marker. Then take a ruler and make a second mark five inches below the first.

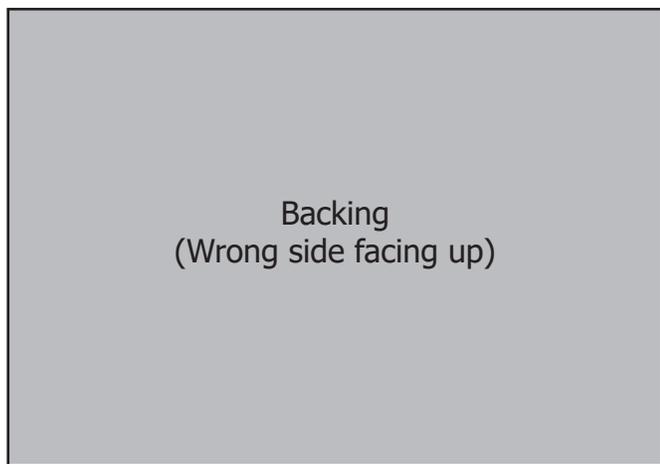


Building Your Quilt Sandwich (continued)

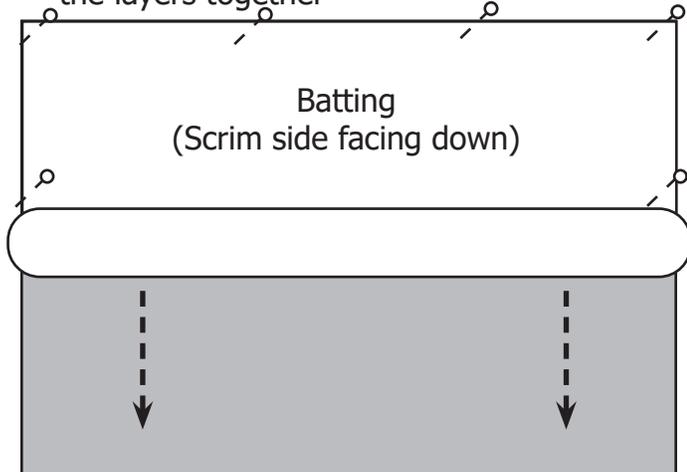
- 4 Roll up your batting and quilt top into separate rolls. Make sure the scrim side of the batting and the wrong side of the quilt top are on the outside of the rolls.



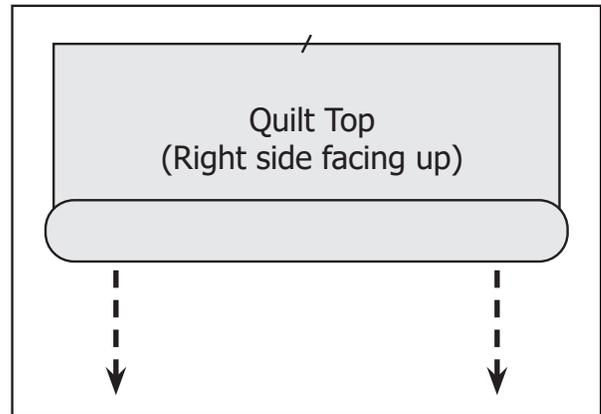
- 5 Make sure your backing fabric is flat and free of any wrinkles.



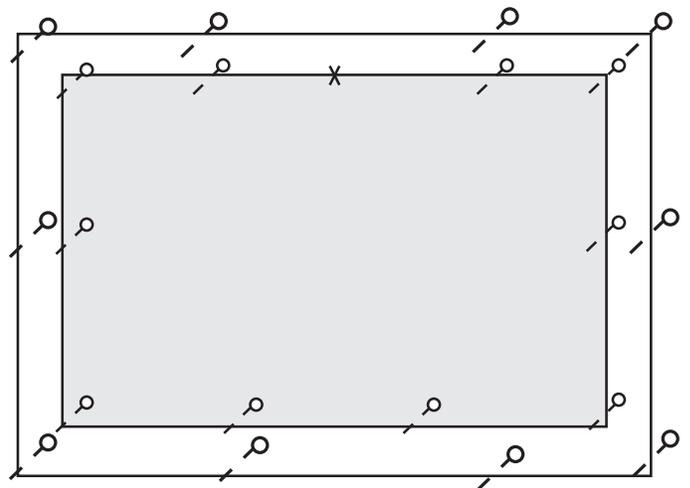
- 6 Line up the top edge of the batting with the top edge of the backing and unroll it. Pin the layers together.



- 7 Align the mark you made on your quilt top with the second mark on the batting. Unroll your quilt top on top of the batting and smooth out any wrinkles.

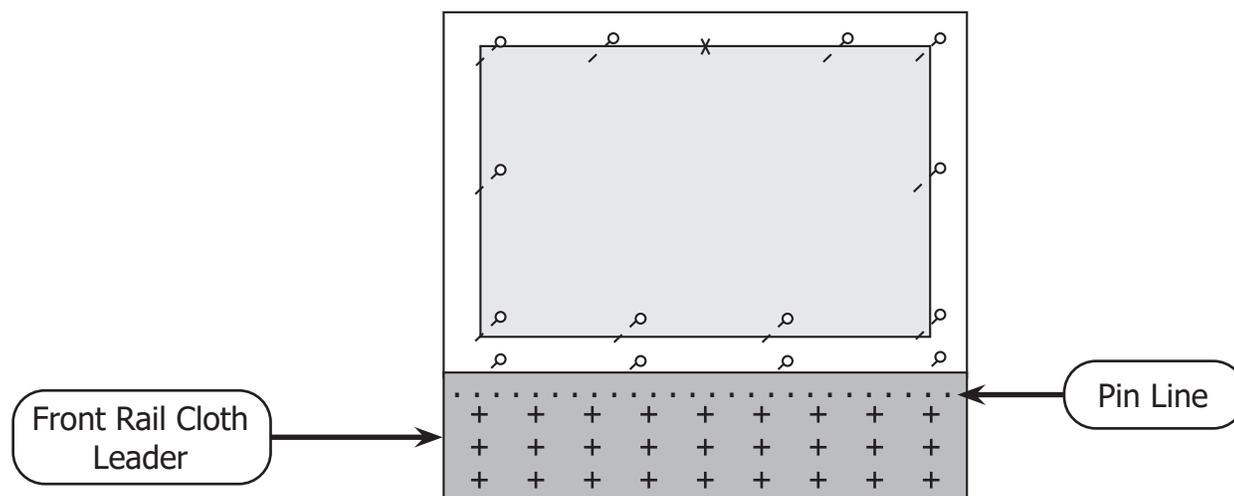


- 8 Pin the quilt top to the other layers. Your quilt sandwich is now ready to have the cloth leaders connected.

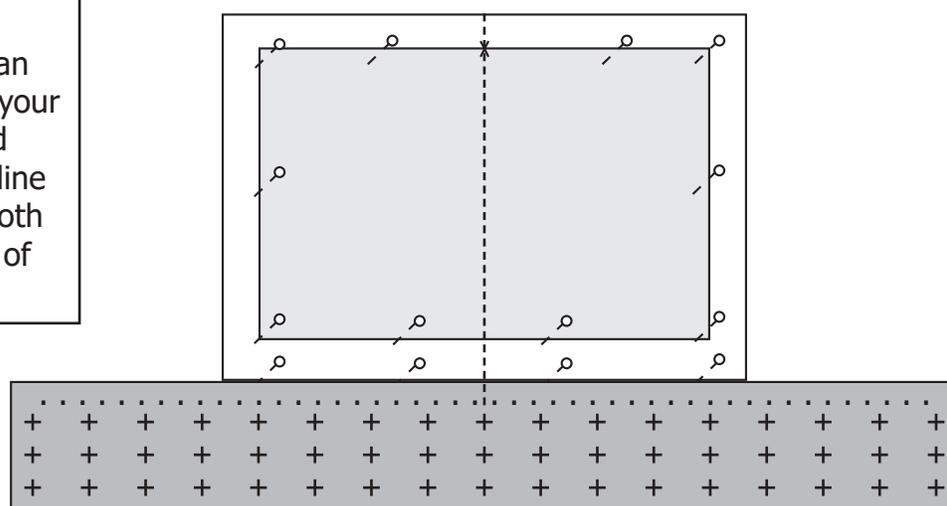


Building Your Quilt Sandwich (continued)

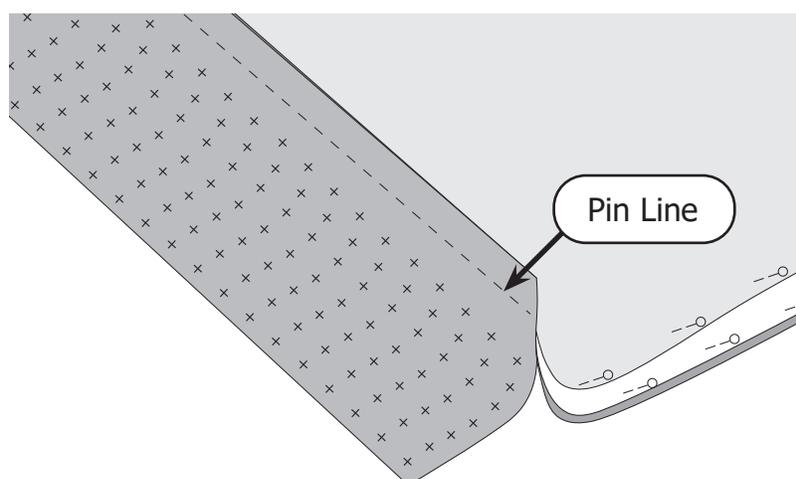
- 9 Find the edge of the **front rail cloth leader** labeled with the **pin line**. Line up this edge of the cloth leader with the bottom of the quilt sandwich.



Note: If your quilt sandwich is smaller than your cloth leader, fold your cloth leader in half and mark the center, then line up the center of the cloth leader with the center of the quilt sandwich.

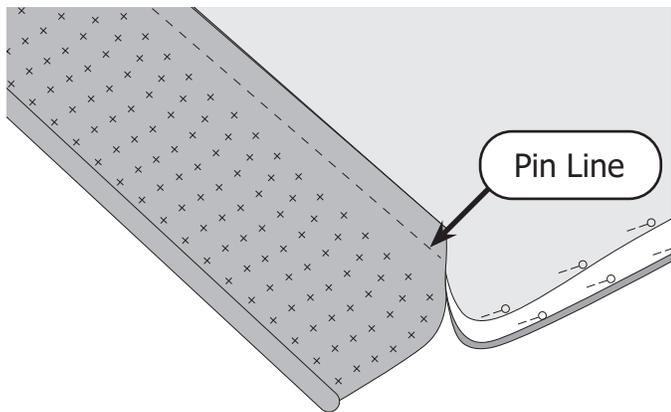


- 10 Pinch up the edges of the cloth leader and the quilt sandwich and pin them together along the **pin line**.

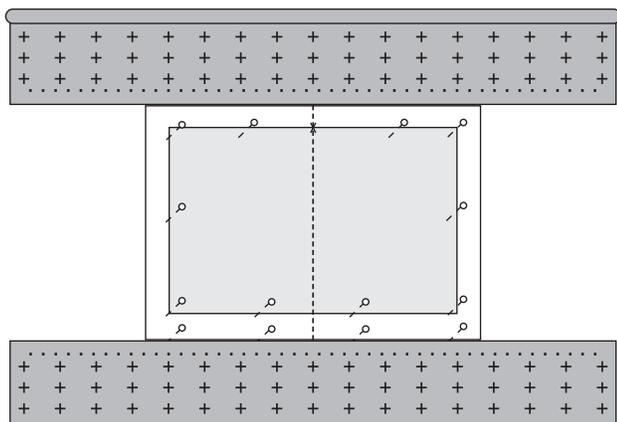


Building Your Quilt Sandwich (continued)

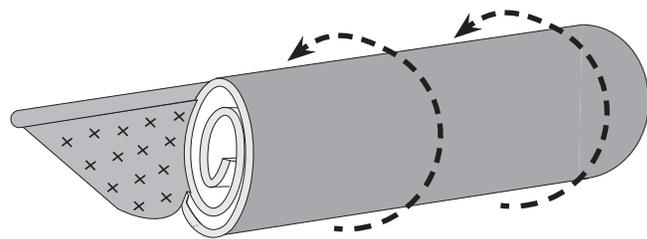
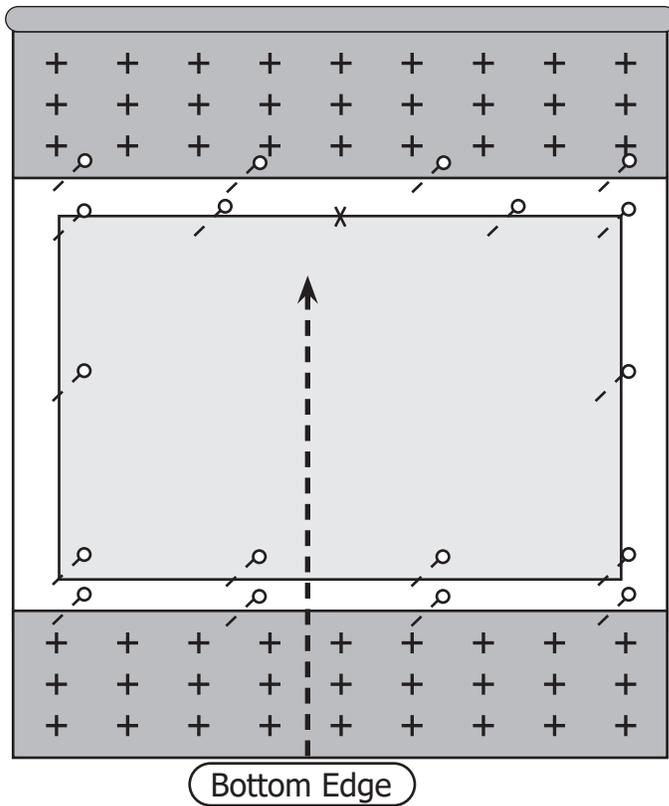
- 11 Repeat steps 1-2 for the take-up rail cloth leader, lining it up with the top edge of the quilt sandwich.



Note: Remember to center the cloth leader with the quilt sandwich if the quilt sandwich is smaller.



- 12 Roll up the quilt sandwich and cloth leaders from the **bottom edge** of the front rail cloth leader.

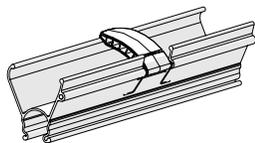


- 13 **Result:** Your quilt is assembled and ready to be taken to your frame.

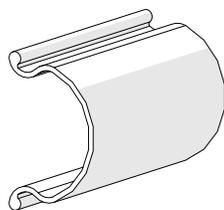
Positioning the Quilt on the Frame

Parts & Tools Needed:

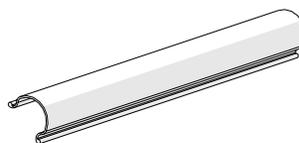
Take-Up Rail
Clamp (x3)



Side Rail Clamp (x2)



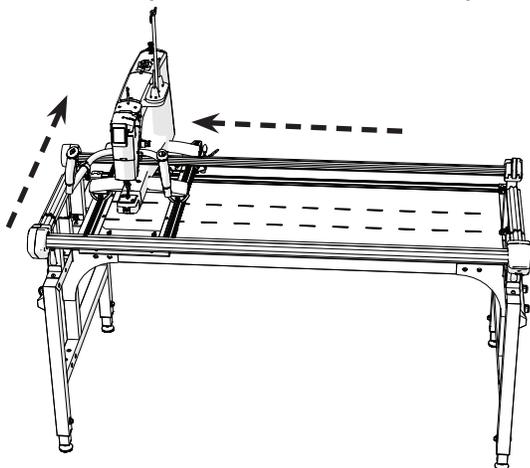
Front Rail Clamp (x2)



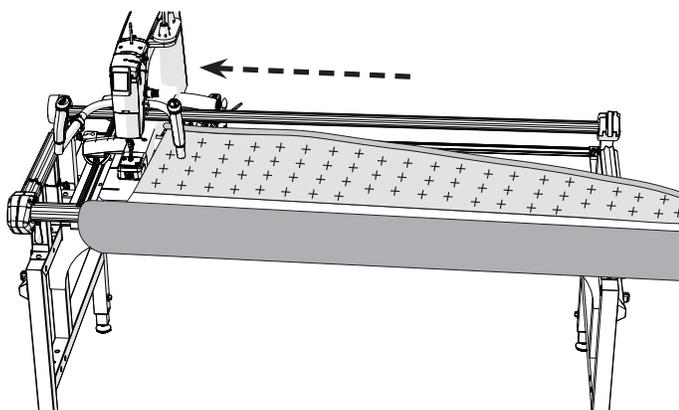
Instructions

Correct placement of the quilt on the frame ensures the machine will be able to reach the edges of the quilt top, the fabric is well-tensioned, and stitching will be square with the quilt edges. Take the following steps to position the fabric on the frame:

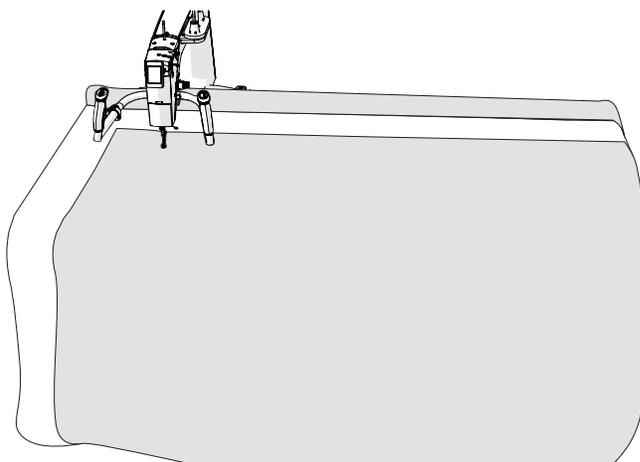
- 1 Move your machine to the rear left corner of the frame, close the channel locks, and make sure your needle is raised up.



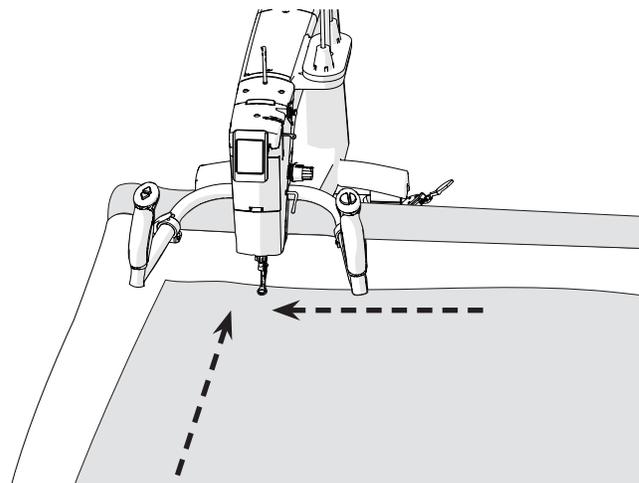
- 2 Slide the side of the fabric under the hopping foot. Make sure the cord for the take-up rail cloth leader goes behind the needle in the machine's throat.



- 3 Square the top edge of the quilt with the back rail and the left edge of the quilt with the left side rail. Smooth out wrinkles.

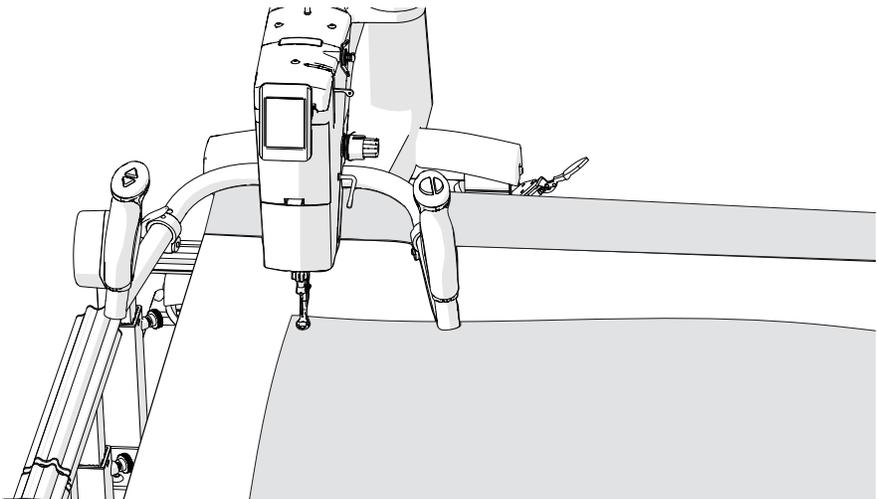


- 4 Push the machine all the way to the back left corner of the frame as far as it will go.

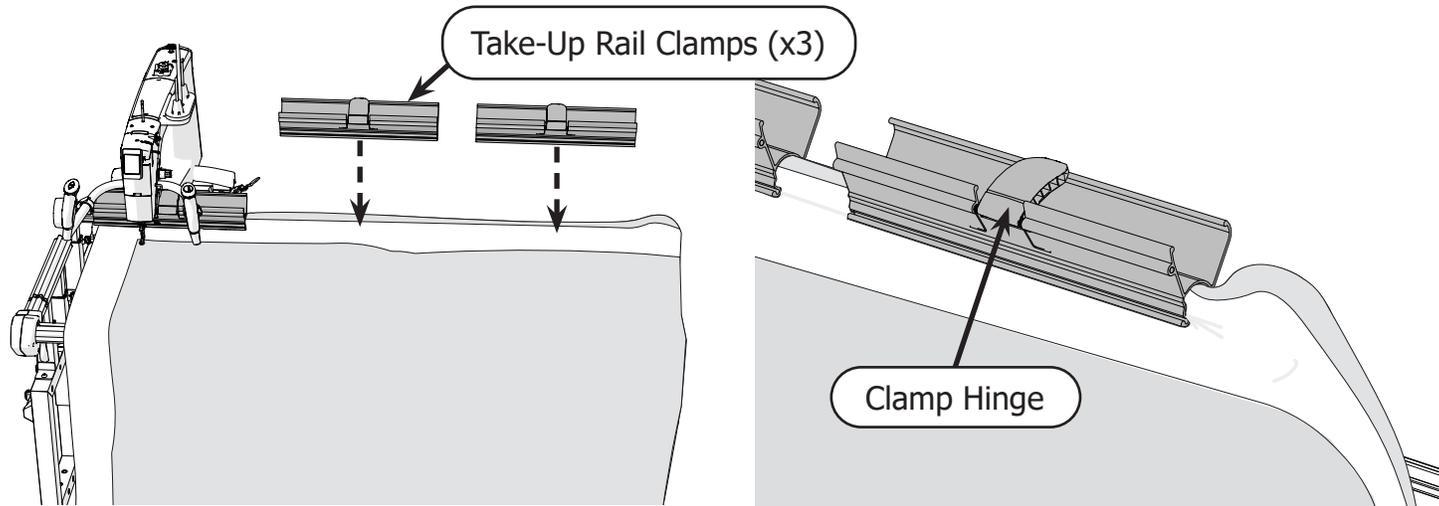


Positioning the Quilt on the Frame (continued)

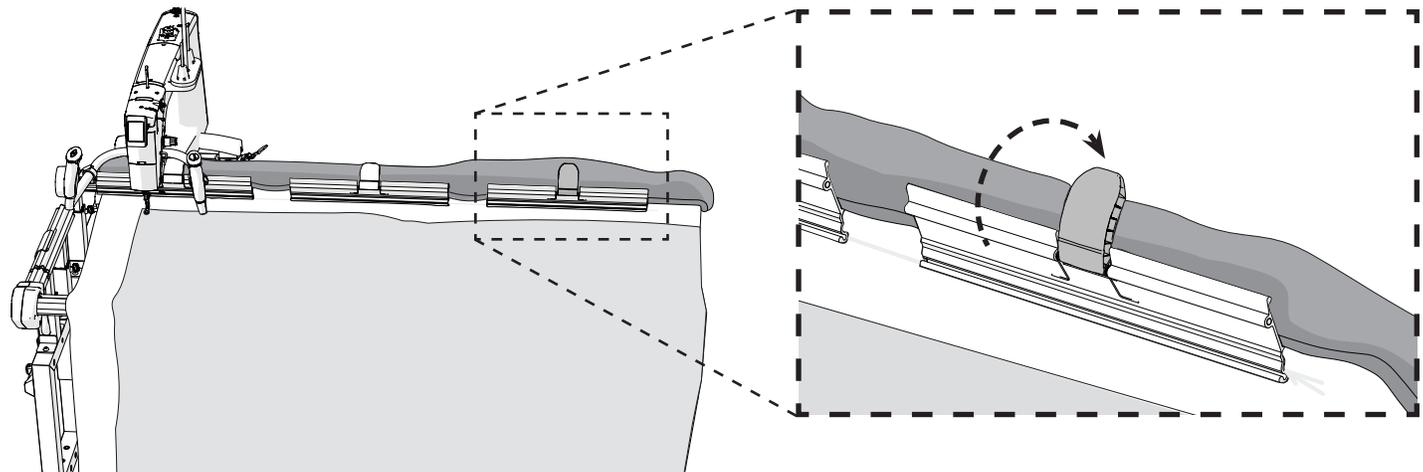
- 5 Adjust the quilt so the hopping foot can reach the corner of the quilt top. The left edge of the quilt may not reach all the way to the side rail.



- 6 Press the **back rail clamps** over the fabric on the back rail, being careful to keep the fabric square and wrinkle-free. The **clamp hinge** of the clamp should face the front of the frame.

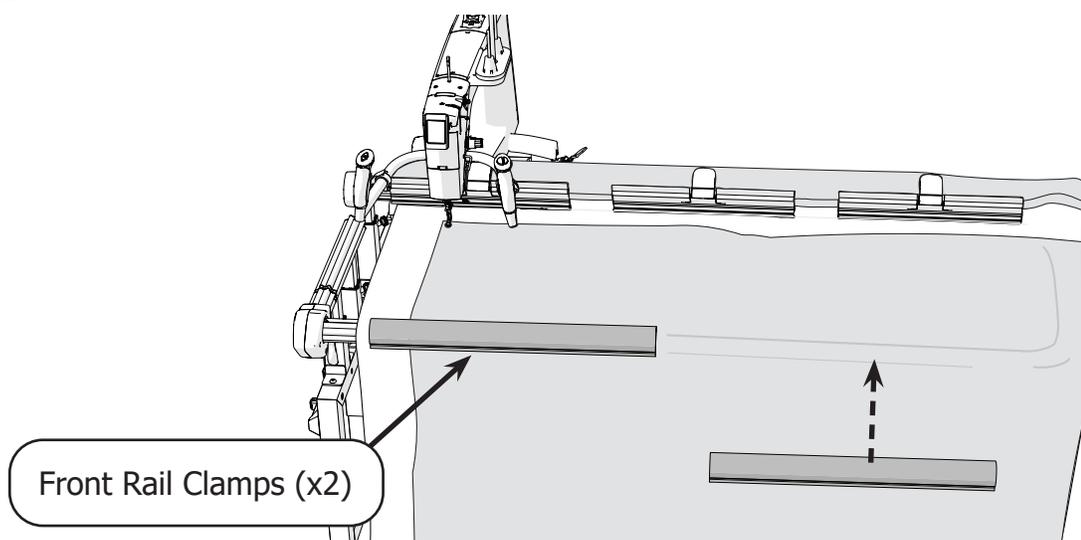


- 7 Roll the cloth leader and any excess fabric into the back rail clip and let the clamp close to hold it in place.

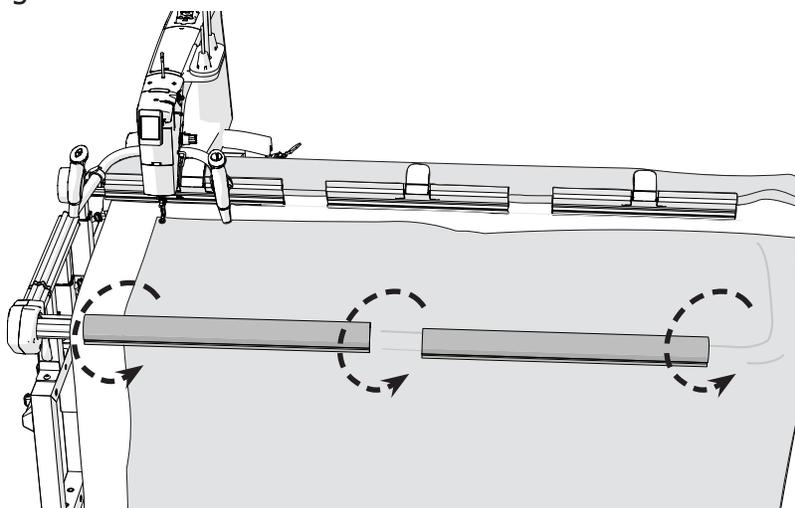


Positioning the Quilt on the Frame (continued)

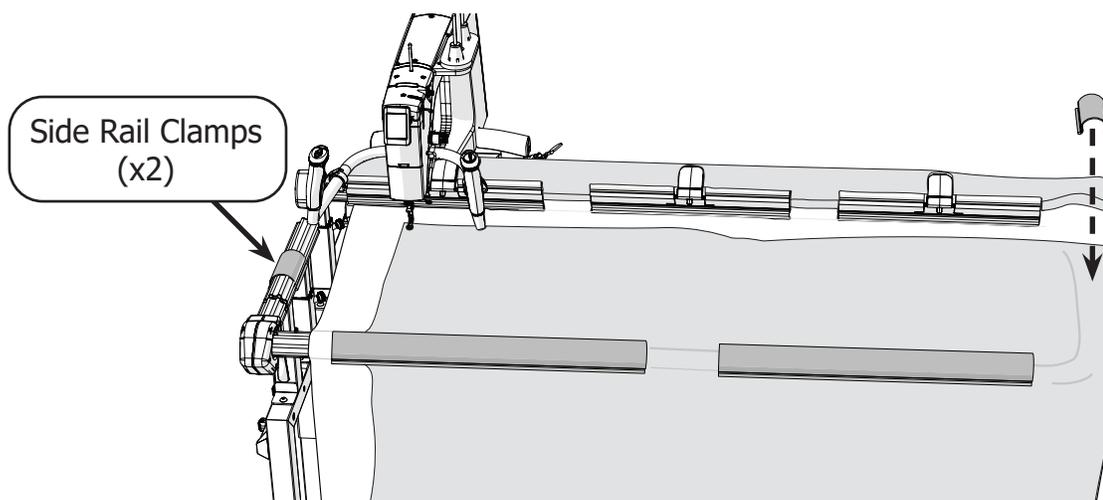
- 8 Attach the **front rail clamps** to the front rail. Smooth out any wrinkles in the fabric layers.



- 9 Once the clamps are attached to the front rail, you can grasp the rail and rotate it towards you to pull the fabric tight.

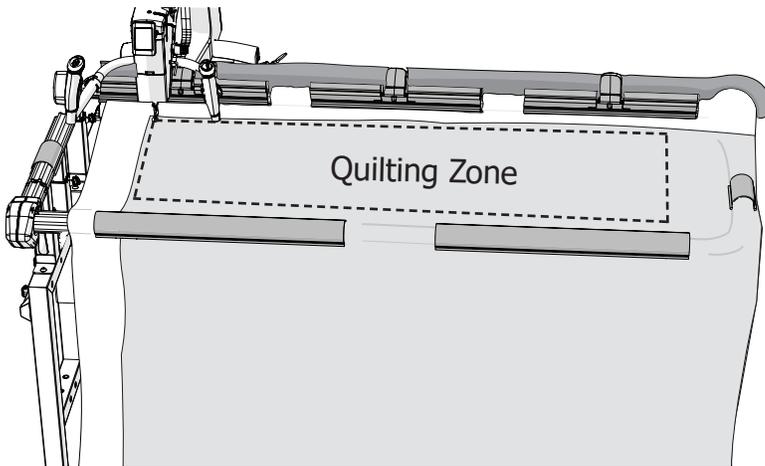


- 10 Press the **short C-clamps** on over the fabric on the side rails. If the fabric does not reach the side rail, simply place the clamp on the side rail without the fabric for safekeeping.



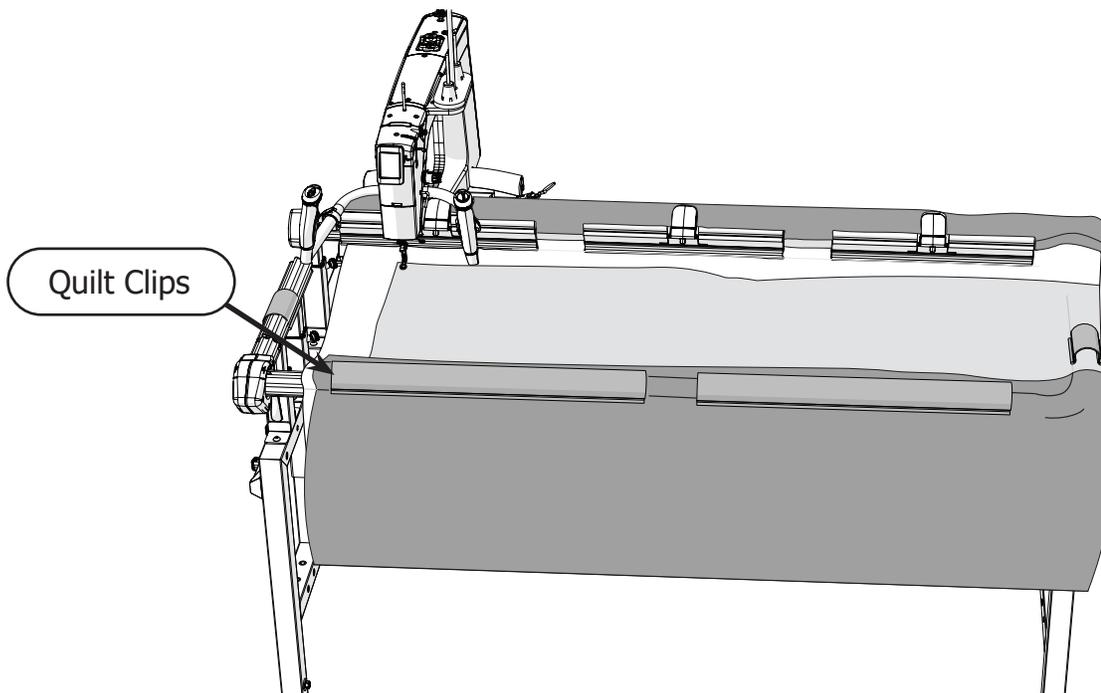
Positioning the Quilt on the Frame (continued)

- 11 The area inside the frame's hoop is called the "**quilting zone**." This is the area that your machine can reach and make stitches. For instructions on moving from one zone to another, see "Moving Your Fabric" on page 63



| | | |
|--------|--------|--------|
| Zone A | Zone B | Zone C |
| Zone D | Zone E | Zone F |
| Zone G | Zone H | Zone I |
| Zone J | Zone K | Zone L |

- 12 To avoid damaging or stepping over the end of your quilt, you can fold the end back over the front rail and secure it in place with an optional **quilt clips** accessory. See our website for details. **Note:** These clips are similar to the front rail clamps that came with your frame but are larger and can slide over the top of the clamps.



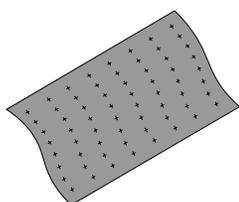
- 13 **Result:** Your quilt is positioned for quilting.

Securing the Side of Your Fabric

Instructions

Sometimes one edge of the fabric won't reach the side rails of the hoop, and you will need to use the bungee clamps or the side cloth leaders to attach and tension the fabric.

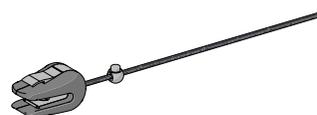
Side Rail
Cloth Leader



(Found in Cloth
Leader Set)

Side cloth leaders create a more even hold along the edge of the quilt.

Bungee Clamps

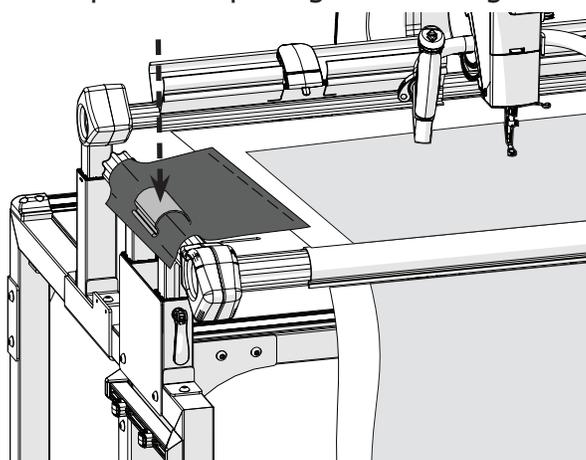
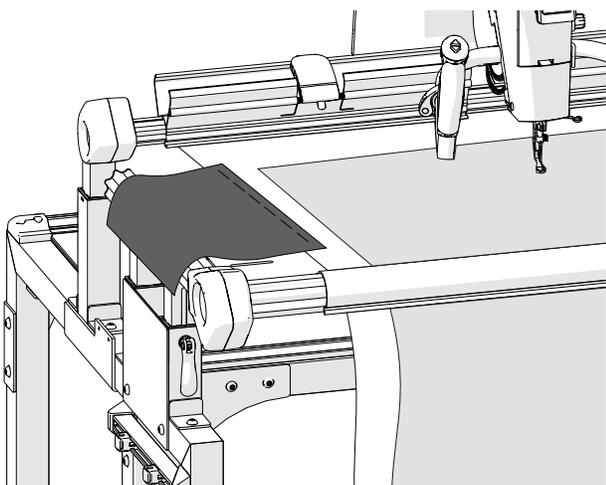


Bungee clamps are easier to attach and remove from the fabric and can reach farther to the middle of the frame.

Note: For instructions on installing the bungee clamps to the frame, see page 38.

Take the following steps to use the side cloth leader:

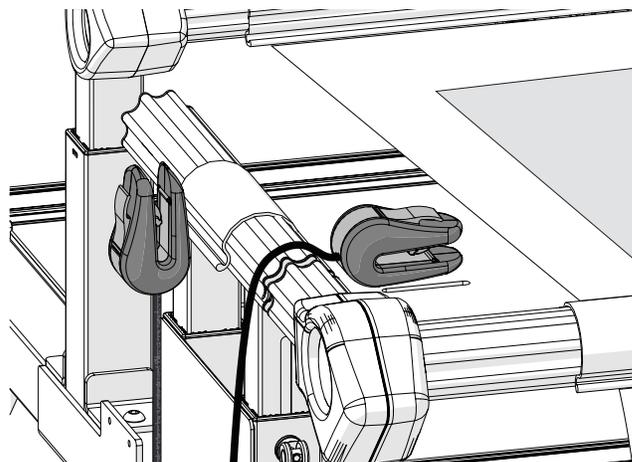
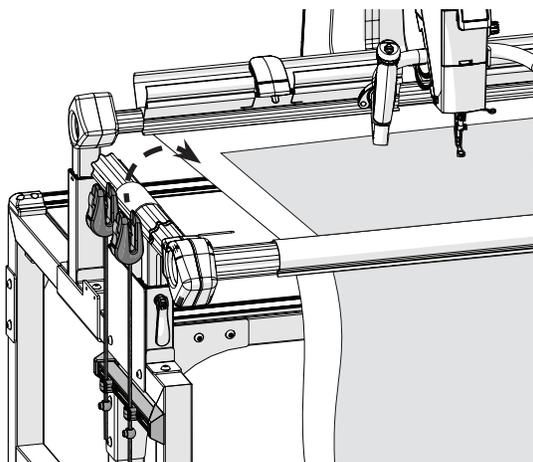
- 1 Lay the side cloth leader over the side rail and pin the edge to the edge of your quilt.
- 2 Secure the side cloth leader to the side rail with a side rail clamp. Make sure the cloth leader pulls the quilt tight and straight.



Securing the Side of Your Fabric (continued)

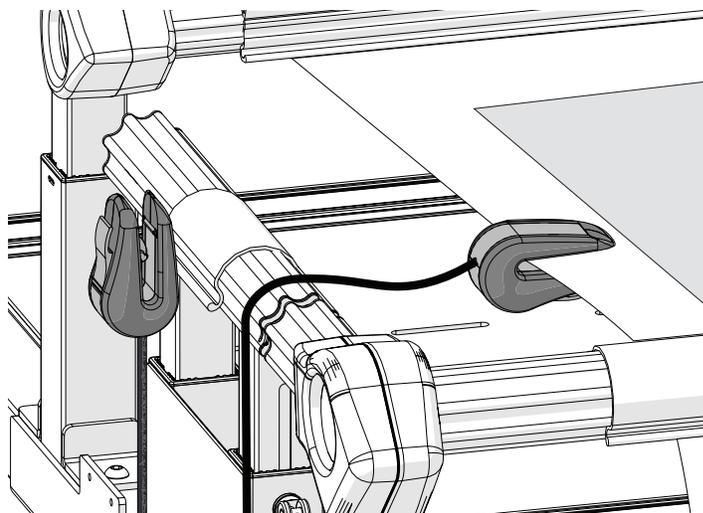
Take the following steps to use the bungee clamps:

- 1 Pull the bungee clamp up and over the side rail.

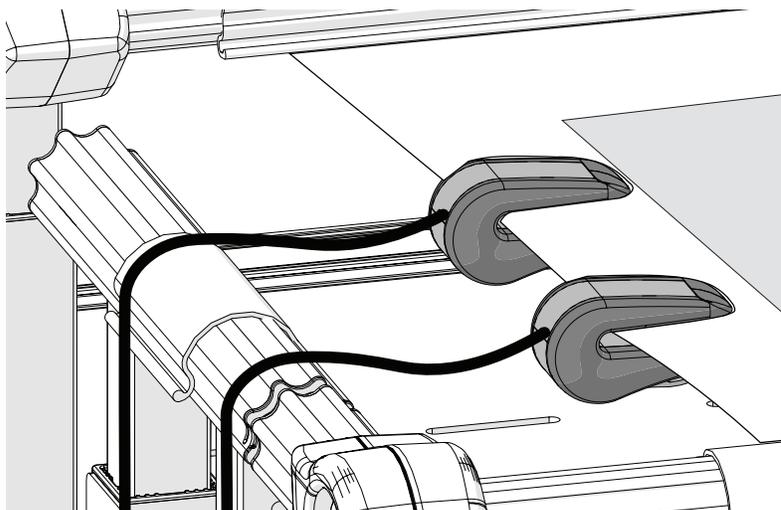


- 2 Slide the clamp over the edge of the fabric. Make sure the **bungee tooth** is digging into your backing fabric, not batting.

Note: You may need to turn the clamp upside down to get the bungee tooth underneath the backing fabric.

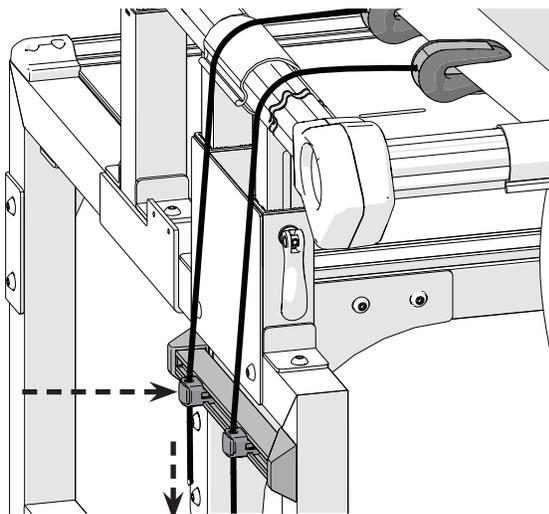


- 3 Repeat steps 1-2 for the other bungee clamp.



Securing the Side of Your Fabric (continued)

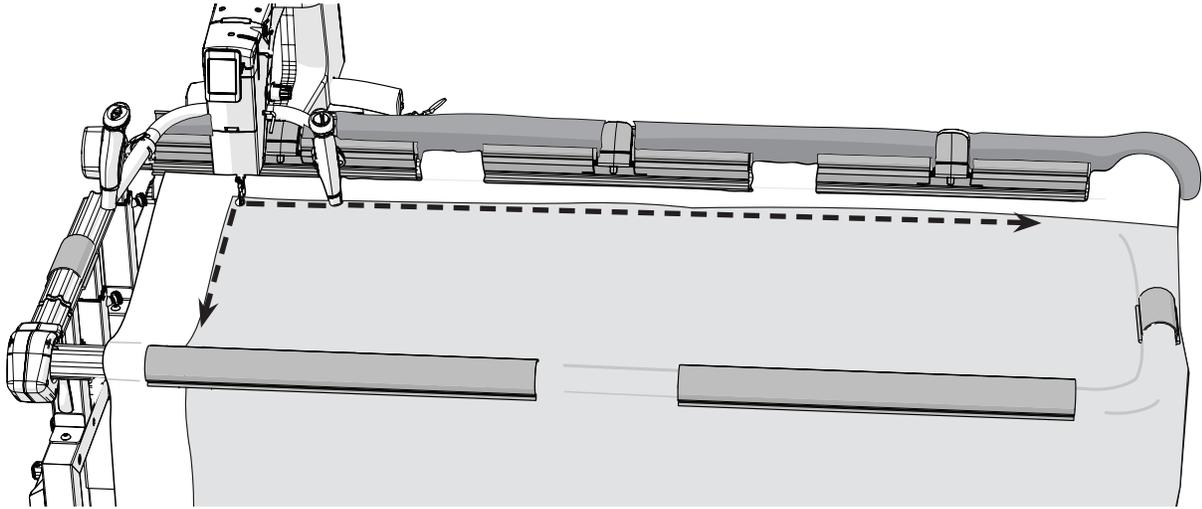
- 4 Press the button on the bungee bar and pull the cord tight so the fabric is straight and smooth.



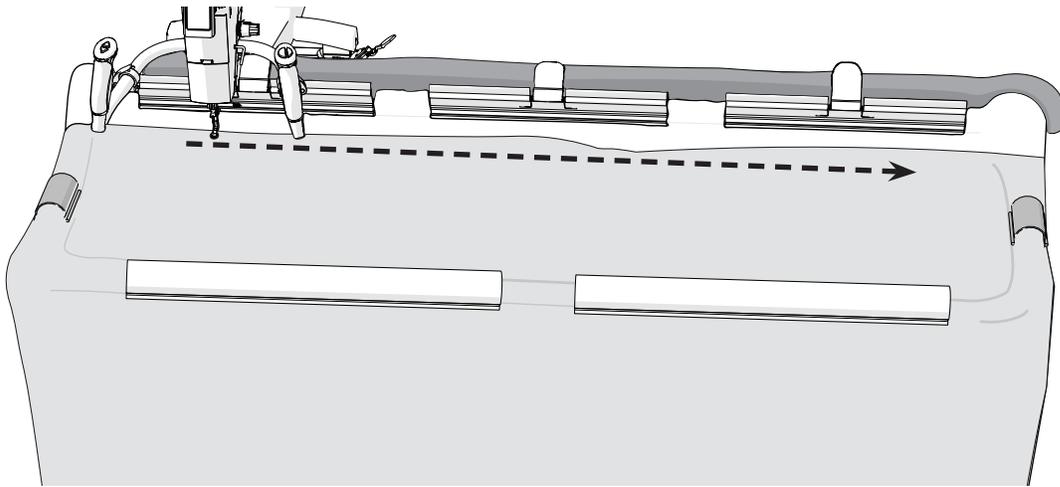
- 5 **Result:** The bungees hold the fabric tightly and smoothly.

Tacking Down Your Quilt

Tack down the edges and sides of the quilt about a quarter of an inch from the backing and batting.



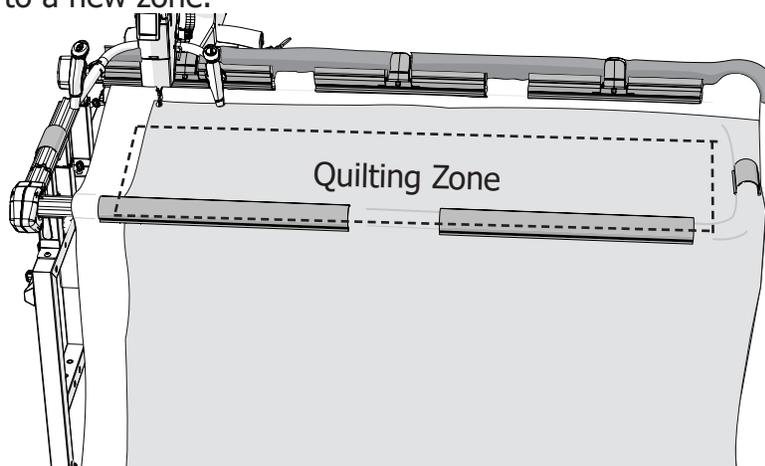
Note: When you move to a new zone, don't forget to tack down the edge of the quilt top first thing. This prevents the edges of the quilt creeping inward as you lay down stitches toward the center.



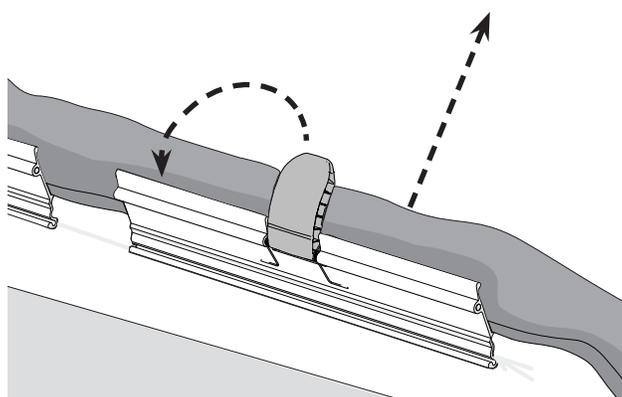
Moving Your Fabric

Instructions

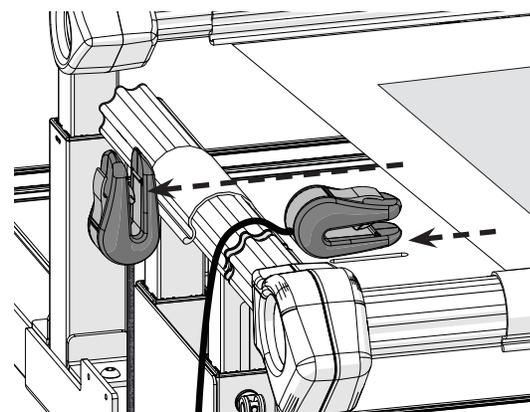
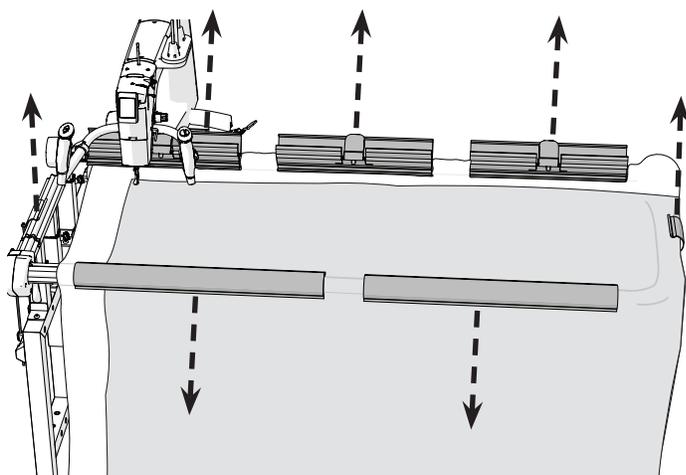
Once you've finished quilting the available space (called a zone) on your quilt, you will need to move your quilt in the hoop to a new zone.



- 1 Open the back rail clamp and remove any fabric that is rolled up inside it.

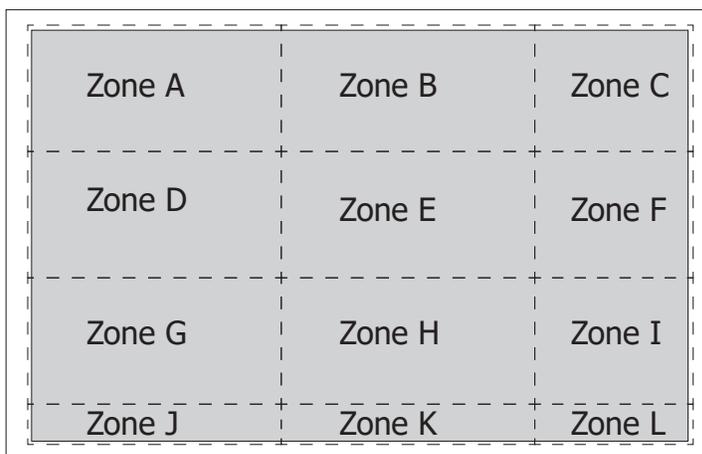


- 2 Remove the fabric clamps and the bungee clamps if they are being used.

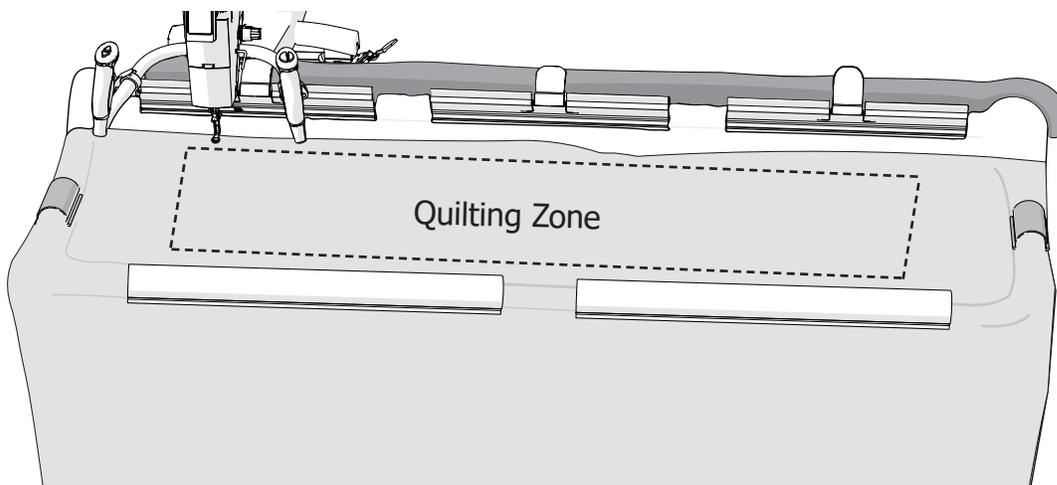


Moving Your Fabric (continued)

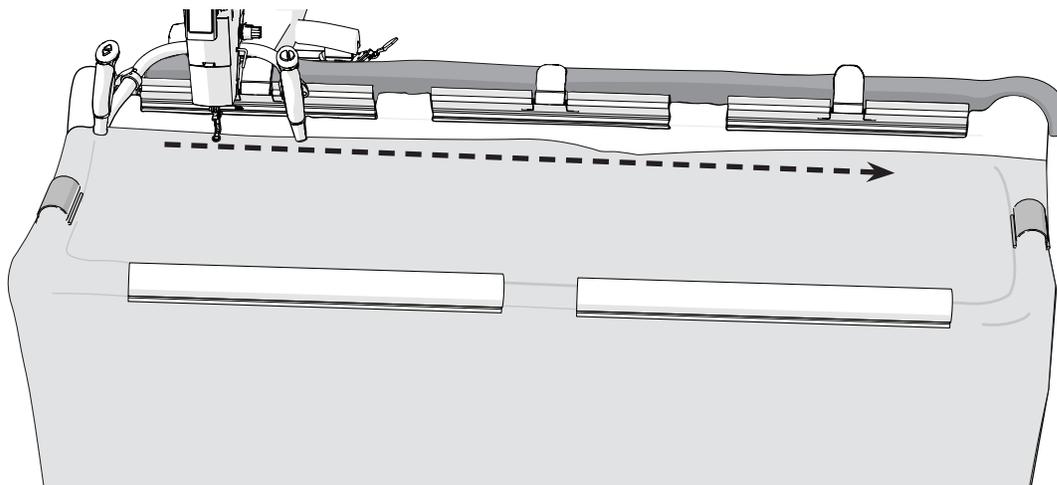
- 3 Position the quilt so that the next zone is within reach of the sewing machine. We recommend going from left to right across the top of the quilt, then working downward from left to right, like reading a book.



- 4 Secure the quilt with the clamps and bungees (if needed).

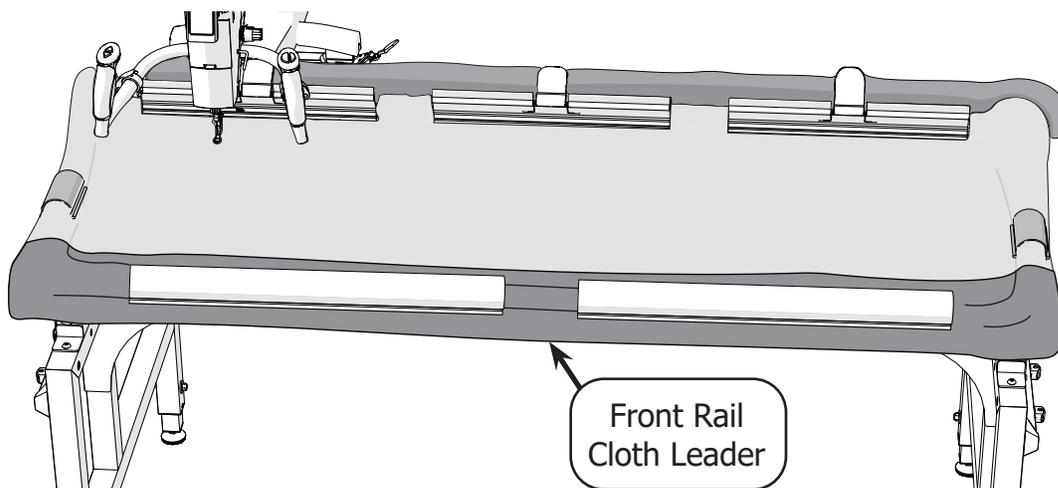


- 5 Tack down top edge of your quilt if you are still in one of the top zones. Place your stitches about a quarter inch from the backing and batting.



Moving Your Fabric (continued)

- 6 When you reach the bottom of your quilt, you can clamp the front rail cloth leader to the front rail so that your machine can reach the edge of the quilt top.



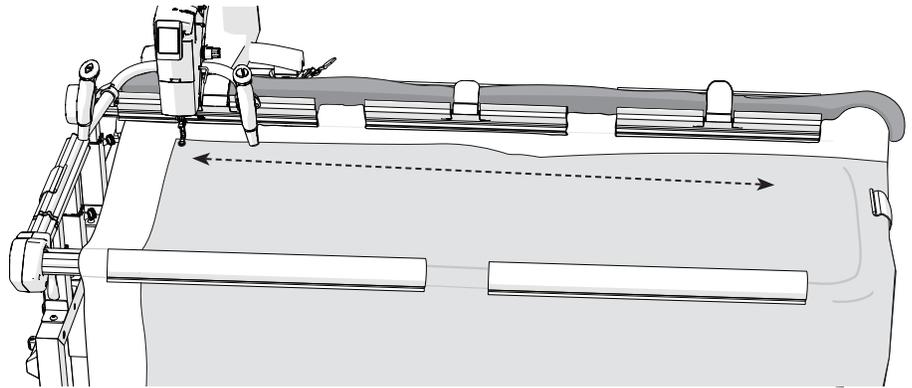
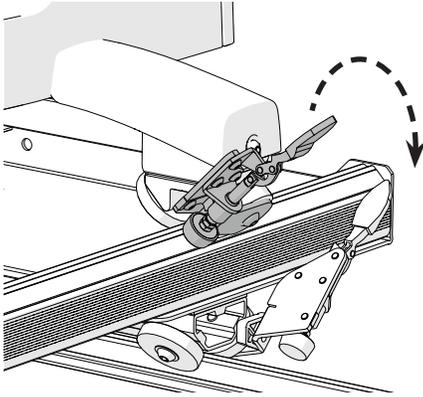
- 7 **Result:** The fabric has successfully been moved to a new zone.

Using the Channel Locks

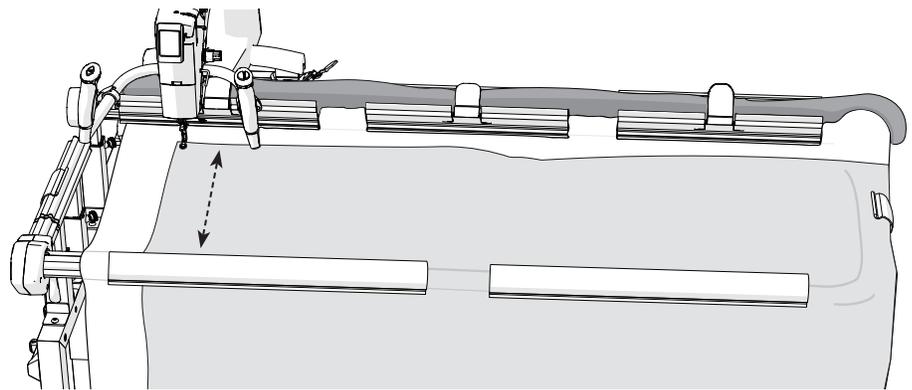
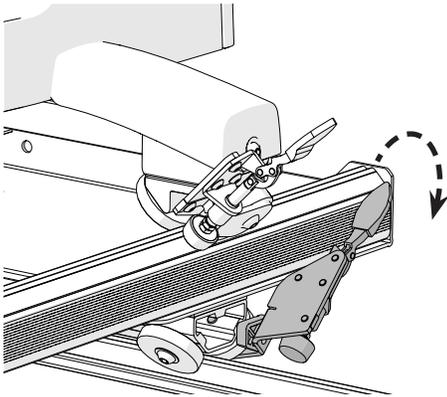
Instructions

The channel locks restrict the movement of the bottom carriage and the sewing machine or top plate so that you can easily stitch a straight line.

- To quilt a straight line horizontally across the frame, close the channel lock on the machine.



- To quilt a straight line from the front-to-back of your frame, close the channel lock on the bottom carriage.

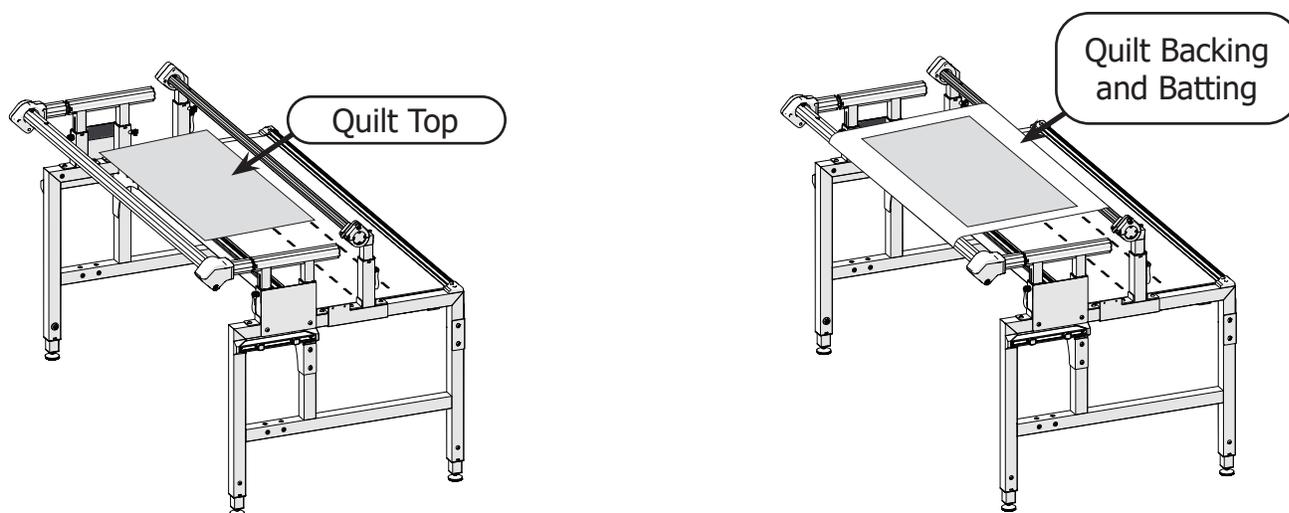


Quilts of Alternative Size and Shape

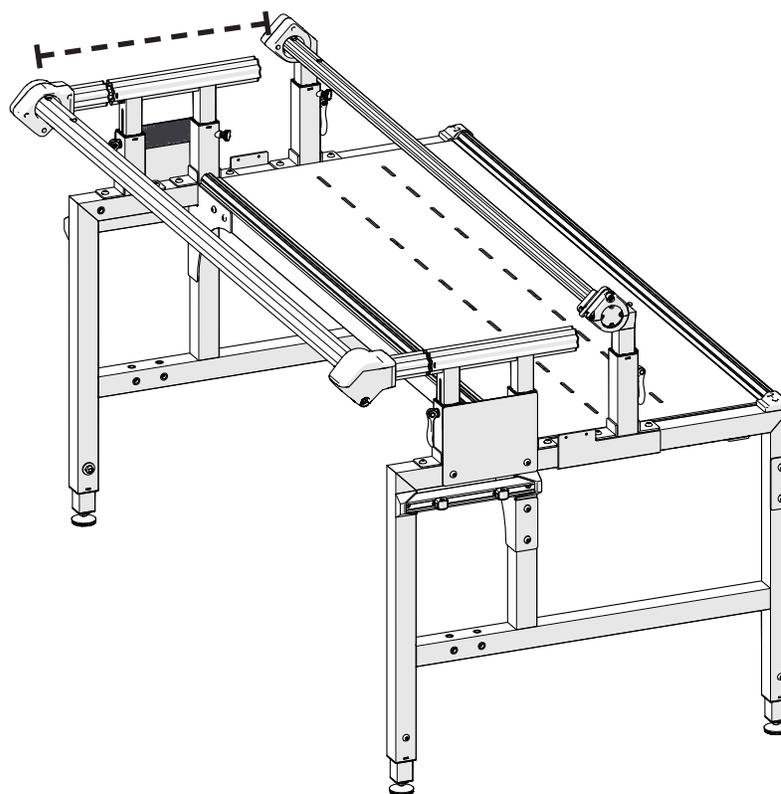
Instructions

Read these steps all the way through first to avoid making a mistake when cutting your backing and batting.

If your quilt top doesn't reach the front and back rails, you will need to cut your quilt backing to be large enough to make up the difference.

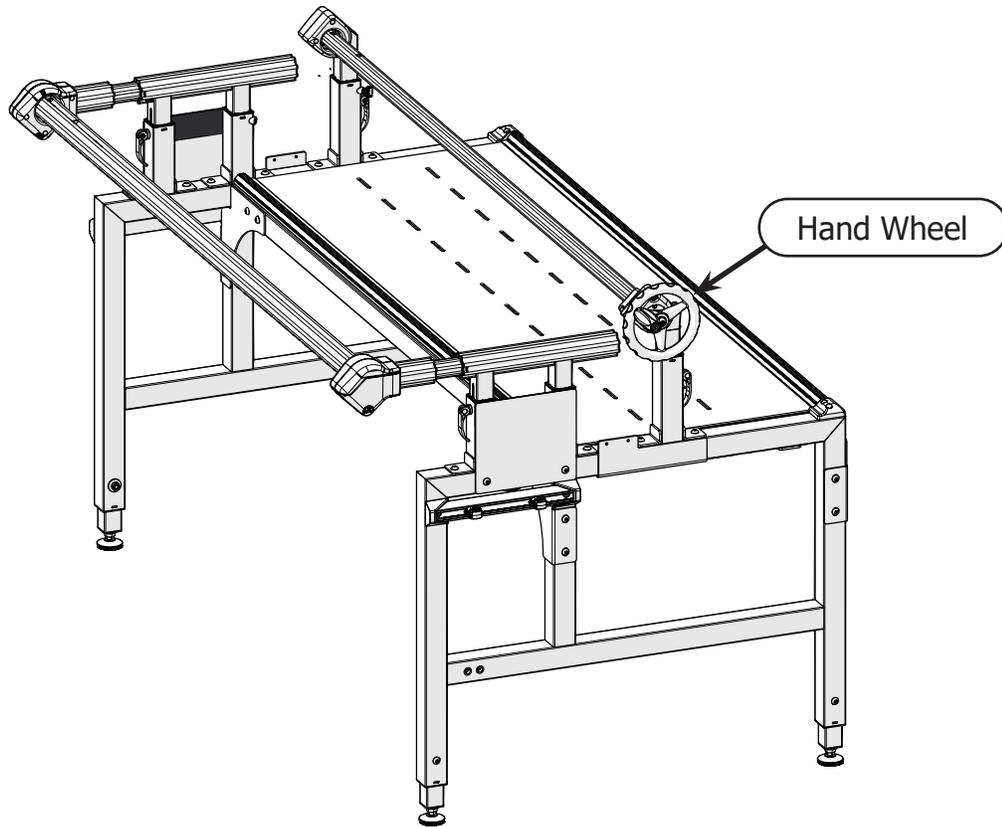


Measure the depth of your frame hoop and add 10" to get the minimum depth of your quilt back.



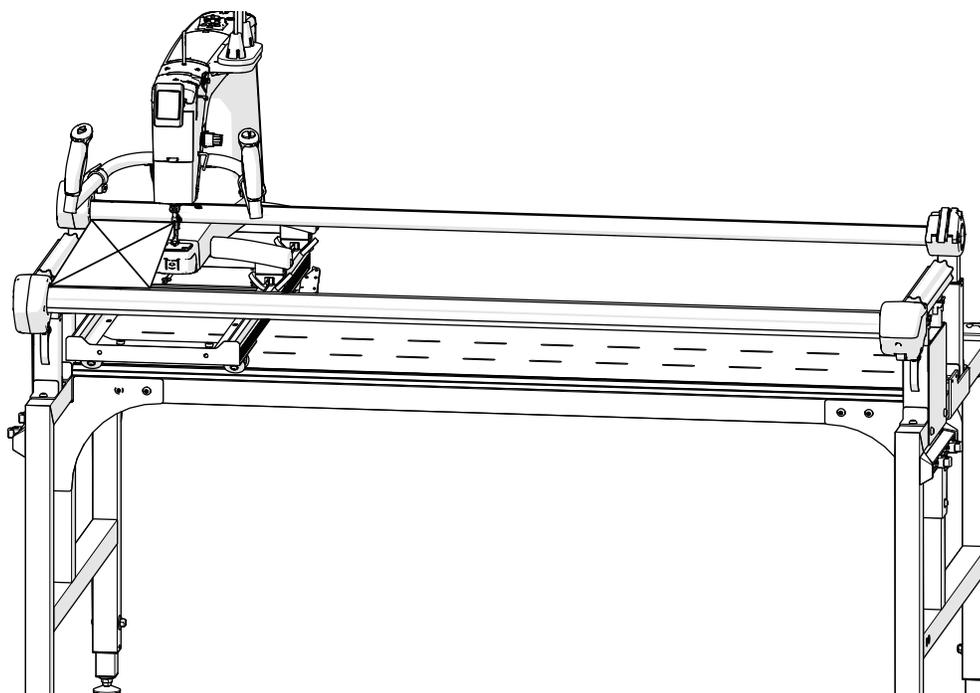
Quilts of Alternative Size and Shape (continued)

If your quilt top is long enough to reach the front and back rails, but too narrow to reach the side rails, we recommend converting the frame to a rolling frame by attaching the included **hand wheel** (see page 74).

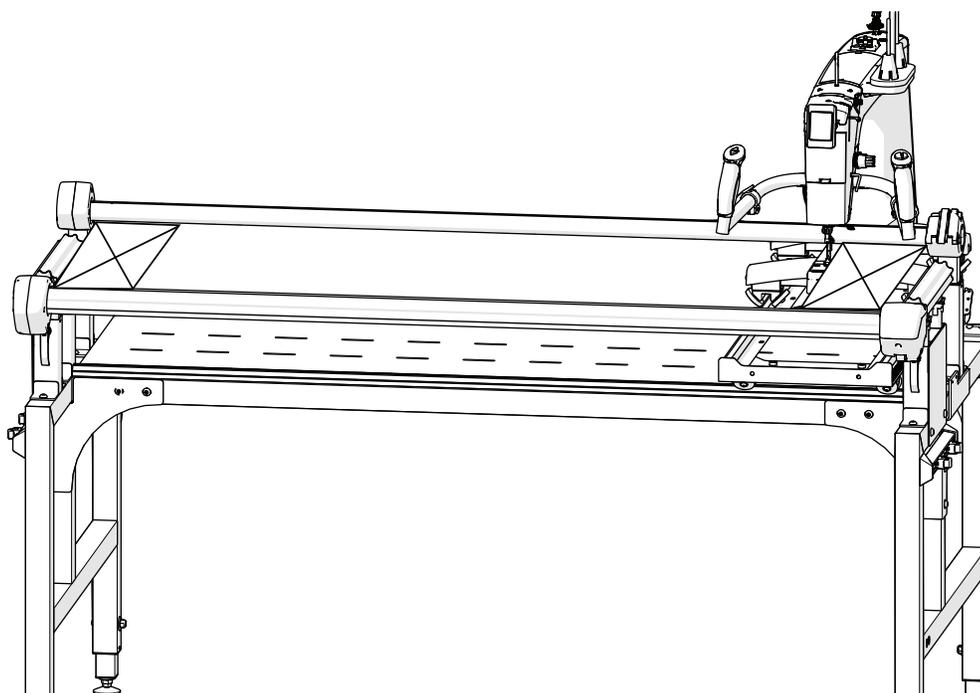


Quilts of Alternative Size and Shape (continued)

The stroke of the machine is another thing to consider when cutting your backing. Push your machine to the back-left corner of your frame. Notice that the needle doesn't reach all the way to the corner.



Move your machine to the front-right corner of the frame and you'll find the same thing. There is an area around the circumference of your frame where your machine will not be able to reach.



If any part of your quilt top ends up in the areas the machine can't reach, you won't be able to sew that part of your quilt top. Cutting the backing extra large will allow you to keep the quilt top in the quitable area of the frame.

Getting Started

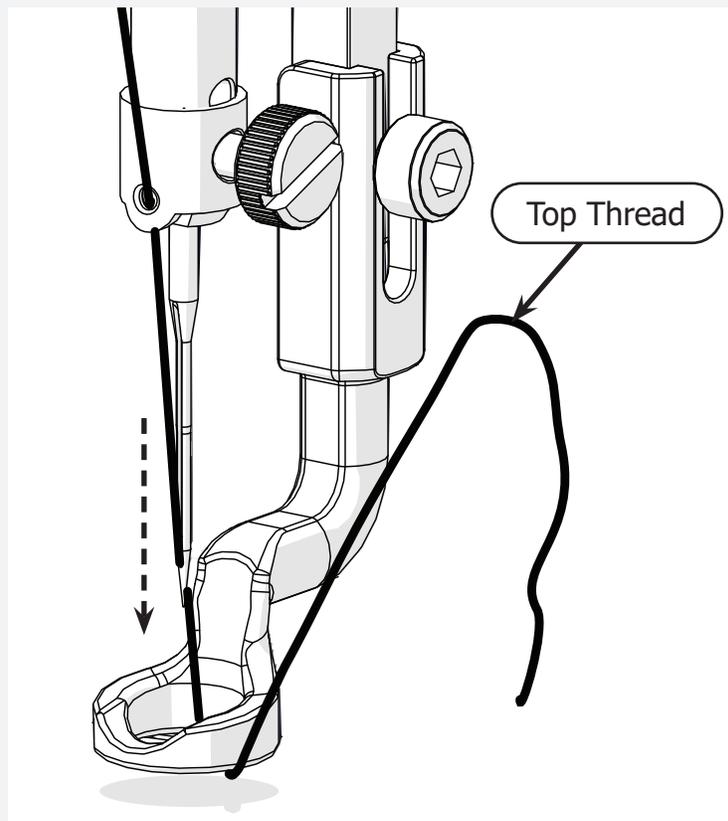
Instructions:

Once you've attached your quilt to your frame and basted down the quilt top edges for the first quilting zone, here are some helpful things to consider.

1. Over time your quilting frame may settle into a slope. If you find the machine drifts or pulls to the side, you may need to re-level the frame.
2. Keep a record of your quilt measurements. This will help when placing patterns later on.
3. Keep your quilting area clean, and wipe down your frame and carriage tracks as well as the machine and carriage wheels frequently.
4. Prepare a small test quilt that you can stitch on between bobbin changes to set your tension. This is also a great way to practice a pattern before stitching it into your quilt. The test quilt should be made of the same materials as your actual quilt, otherwise it will not work for setting tension.
5. Pull up the bobbin thread at the start of a new session of stitching, and also at the end. This will prevent the bottom thread tail from getting sewn down on the bottom of the quilt.

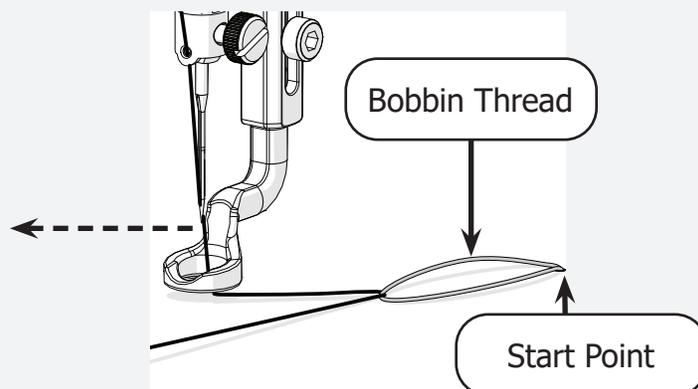
To pull up bobbin thread at the start of stitching:

- a First, position the needle directly above where you want to begin your pattern.
- b Pull on the **top thread** so that it is tight and jog the needle up and down using the single stitch button on the display.

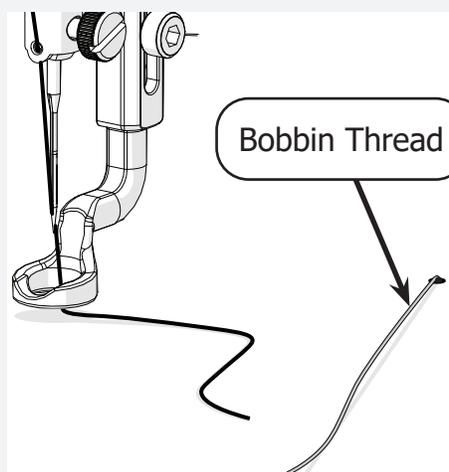


Getting Started (continued)

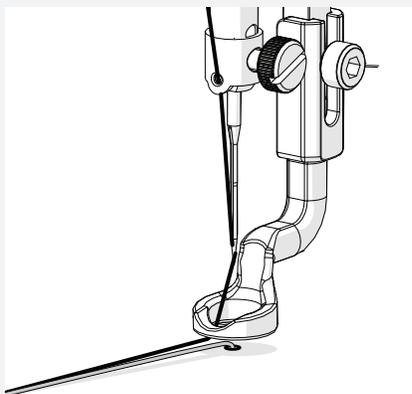
- c While still tightly holding the top thread, move the machine several inches to the side. Your top thread should pull a loop of **bobbin thread** through the **start point** to the top of the fabric.



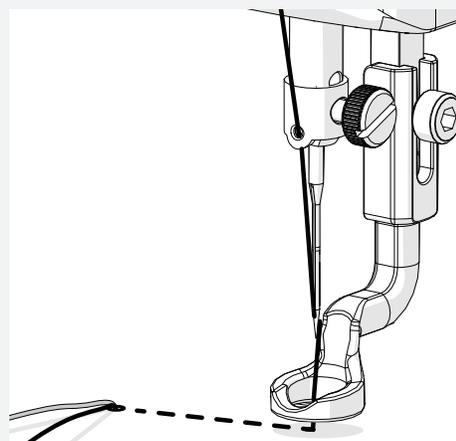
- d Pull on the loop of **bobbin thread** until the loose end of the thread comes up from underneath the fabric.



- e Pull on the bobbin thread while moving the machine back to the start point. This makes sure that there is no loose thread underneath the fabric.



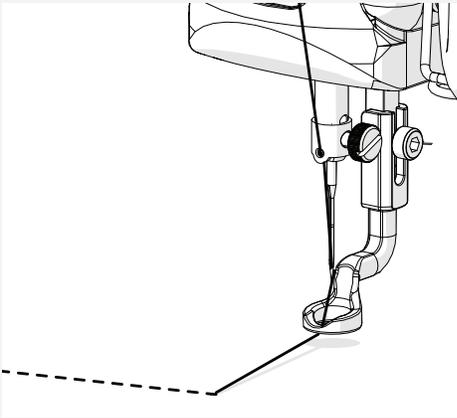
- f Make a securing stitch and then begin stitching.



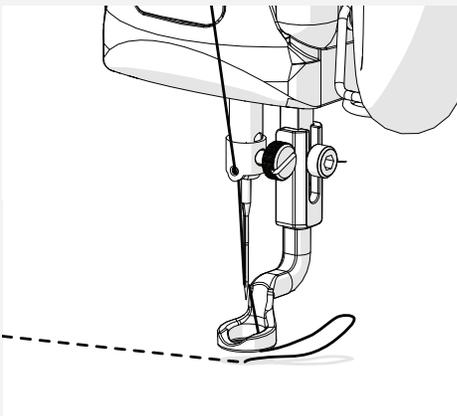
Getting Started (continued)

To pull up bobbin thread at the end of stitching:

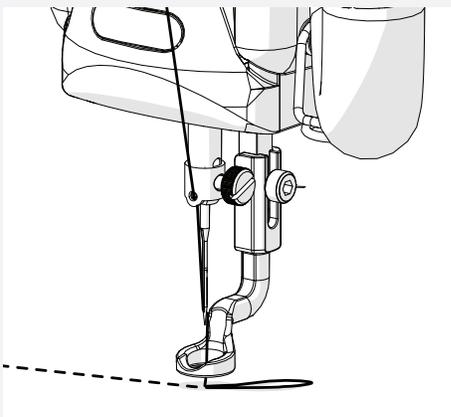
- a Move the machine away from the tie-off stitch.



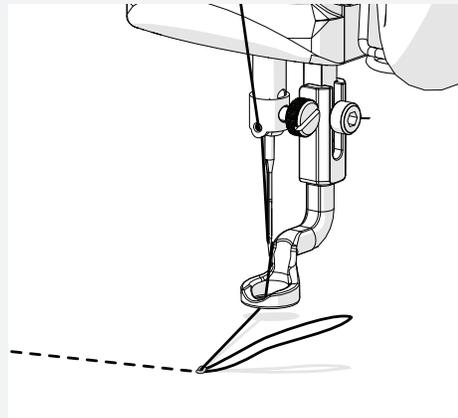
- b Hold the thread to make a loop and return the machine to the tie-off stitch.



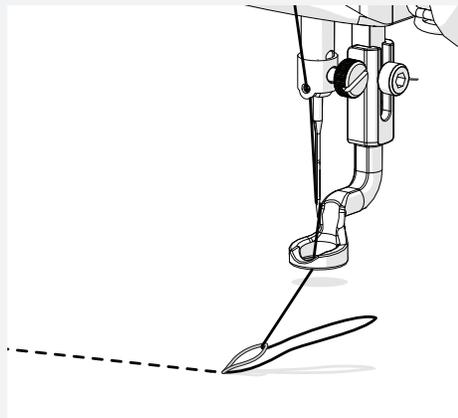
- c Make a single stitch over the tie-off.



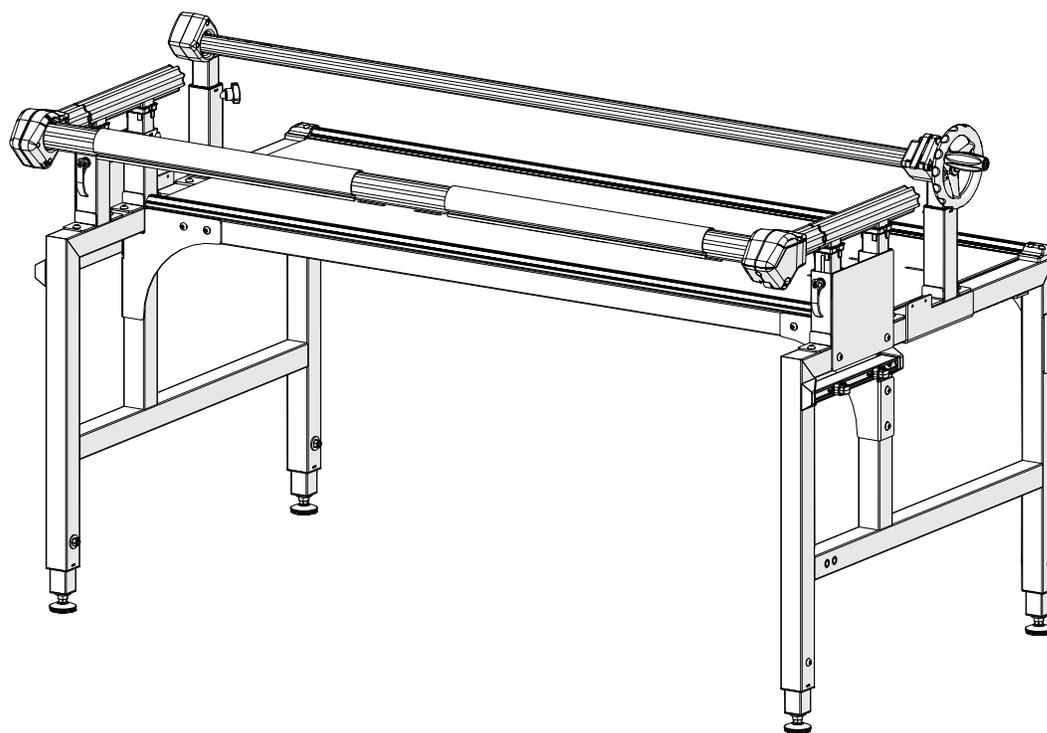
- d Hold the loop and move the machine away from the tie-off again.



- e Keep moving away from the tie-off until a loop of bobbin thread is pulled up above the fabric. Cut all threads close to the tie-off.



Rolling-Frame Setup



Convert to a Rolling Frame

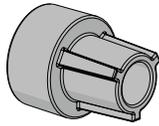
Parts & Tools Needed:

Rolling Take-Up Rail Cap



(Box 3)

Hand Wheel Collar



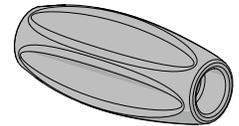
(Box 1: Hardware Box)

Hand Wheel



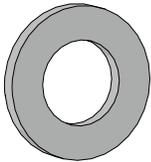
(Box 1: Hardware Box)

Hand Wheel Knob



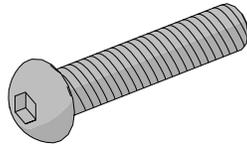
(Box 1: Hardware Box)

Hand Wheel Washer



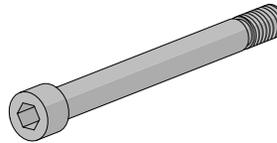
(Box 1: Hardware Box)

SBHCS M10 x 55 mm



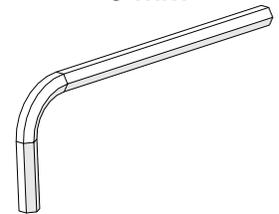
(Box 1: Hardware Box)

M8 Shoulder Bolt



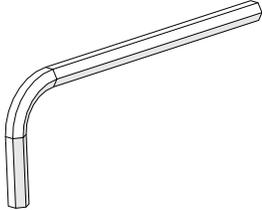
(Box 1: Hardware Box)

Allen Wrench 6 mm



(Box 1: Hardware Box)

Allen Wrench 2.5 mm



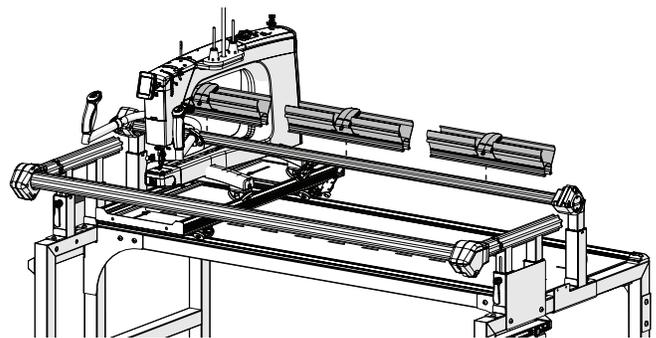
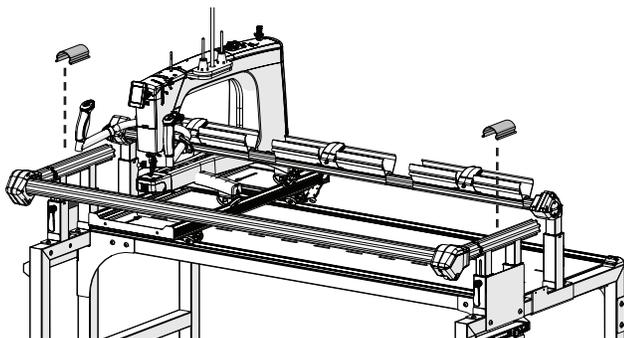
(Box 1: Hardware Box)

Instructions

This frame has the option of installing a hand wheel and converting to a rolling frame (see "Choose Your Frame Setup" on page 47 for details on when to use the rolling-frame setup).

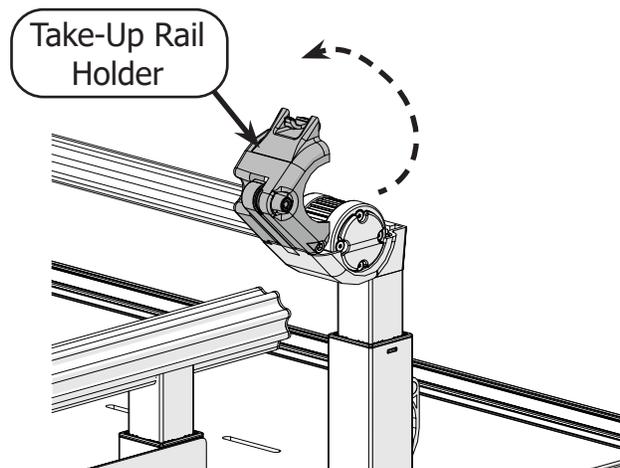
Take the following steps to install the hand wheel onto your frame:

- 1 Remove the clamps from the side rails and the take-up rail because they will not be needed in the rolling-frame setup.

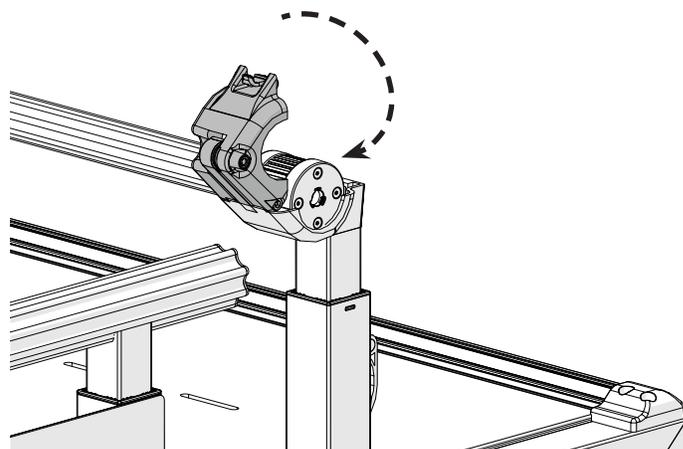


Convert to a Rolling Frame (continued)

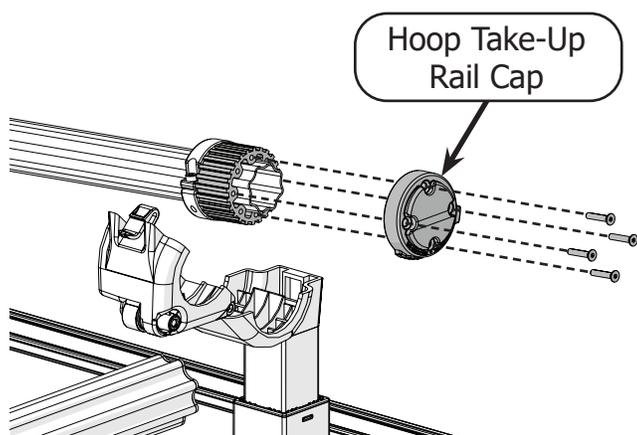
- 2 Open the right **take-up rail holder**.



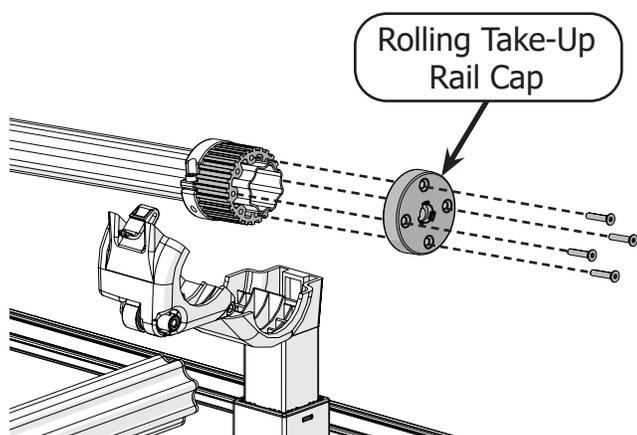
- 5 Return the rail and close the take-up rail holder.



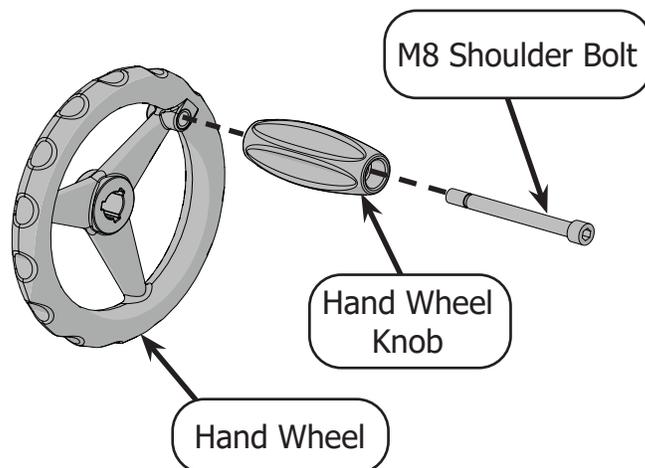
- 3 Lift the take-up rail and use the 2.5 mm Allen wrench to remove the **hoop take-up rail cap** from the end of the rail.



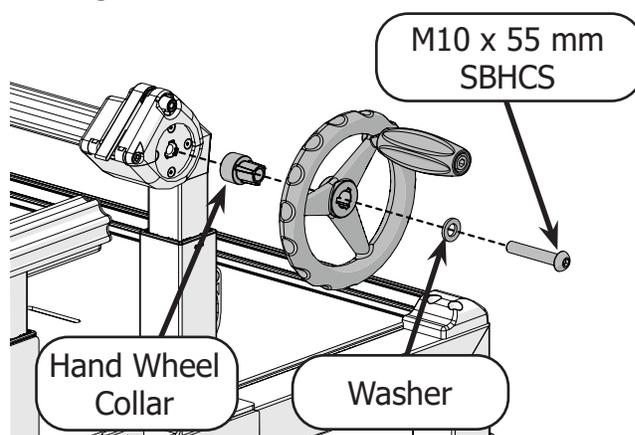
- 4 Use the 2.5 mm Allen wrench to install the **hoop take-up rail cap** to the end of the rail.



- 6 Use the 6 mm Allen wrench to and the **M8 shoulder bolt** to attach the **hand wheel knob** to the **hand wheel**.

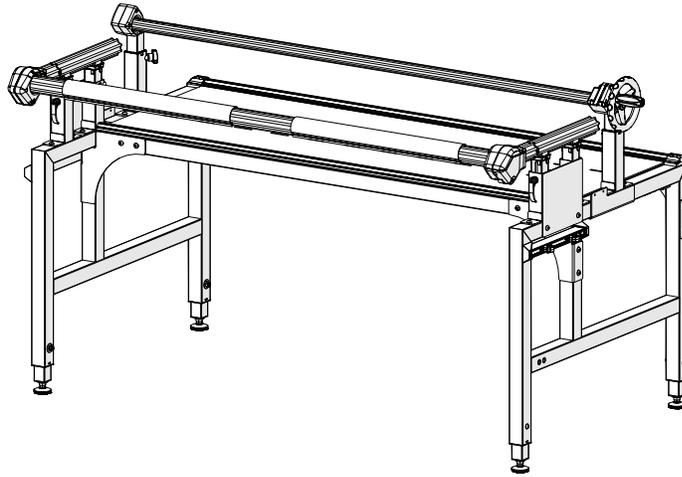


- 7 Attach the **hand wheel collar**, **hand wheel**, and **washer** to the end of the take-up rail with the **M10 x 55 mm SBHCS**. Tighten with the 6 mm Allen wrench.



Convert to a Rolling Frame (continued)

8' **Result:** The hoop frame has been converted to a small, rolling style frame.



Building Your Quilt Sandwich

Parts & Tools Needed:



Fabric Marking Pencil or Chalk (not included)



Measuring Tape or Ruler (not included)



Pins (not included)

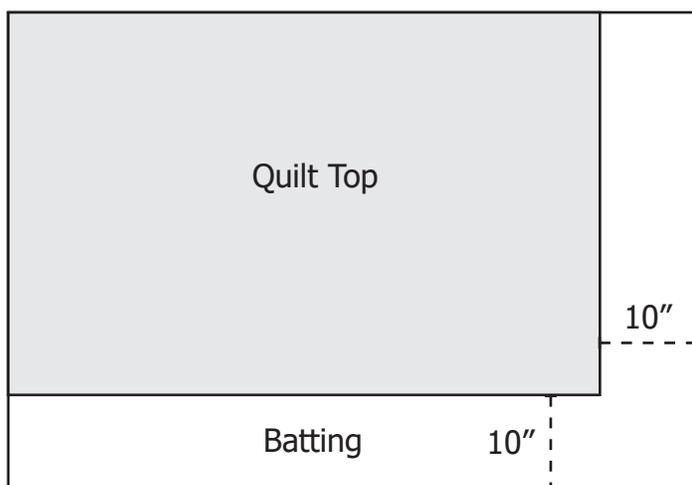
Instructions

The backing and batting help position the quilt top so that it is within reach of the machine on the frame. Take the following steps to cut out the batting and backing, and make a quilt sandwich:

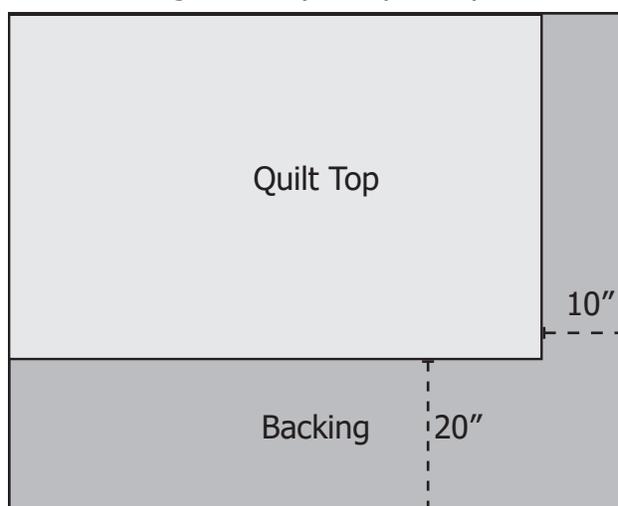
Right Side/Wrong Side: Some fabrics have a front side that has a print or other qualities that the back side does not have, or may look washed out on the back. The front of the fabric is called the “right side.” The side that looks washed out or doesn’t have the print/texture is called the “wrong side.”

Scrim Side: The scrim side is a structural layer on some types of batting. It often feels coarse or pimpled, while the other side feels smooth or “puffy.”

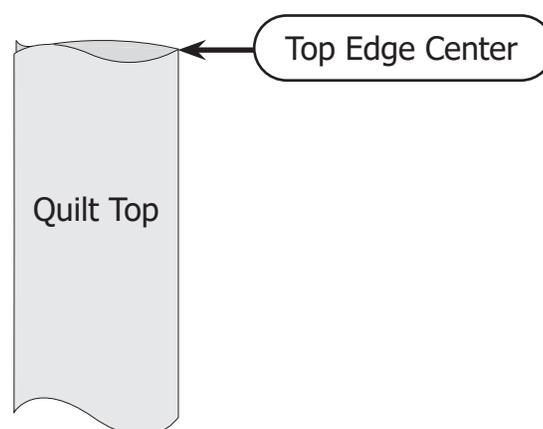
- 1 Cut out a piece of batting that is 10” longer and wider than your quilt top.



- 2 Cut your backing fabric to be 10” wider and 20” longer than your quilt top.

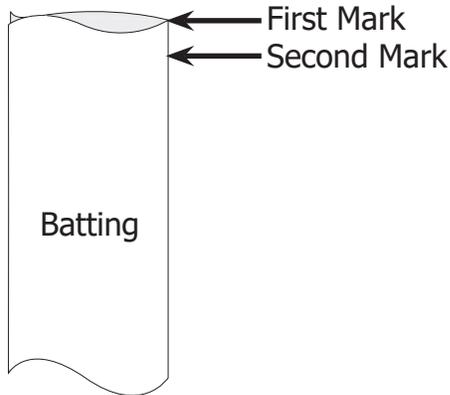


- 3 Fold your **quilt top** in half and mark the **center of the top edge** with a pin or marker.

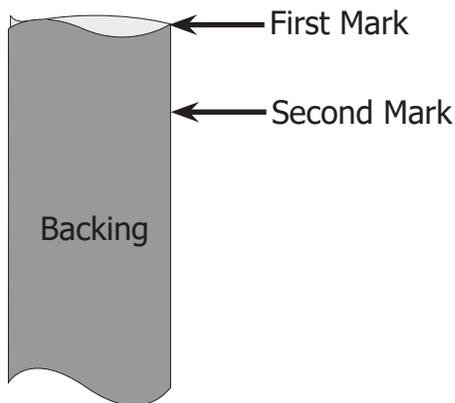


Building Your Quilt Sandwich (continued)

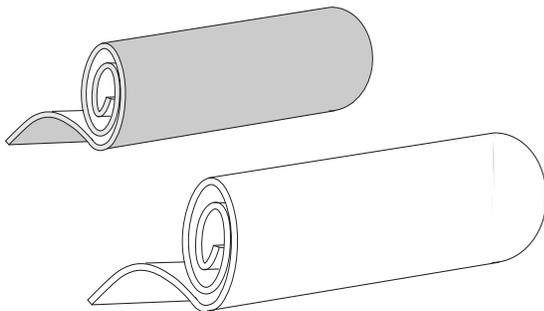
- 4 Fold the **batting** in half and mark the center of the top edge with a pin or marker. Then take a ruler and make a second mark five inches below the first.



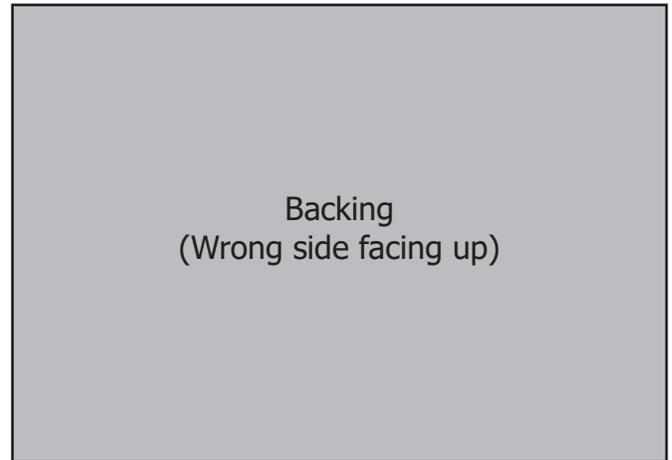
- 5 Fold the **backing** in half and mark the center of the top edge with a pin or marker. Then take a ruler and make a second mark ten inches below the first.



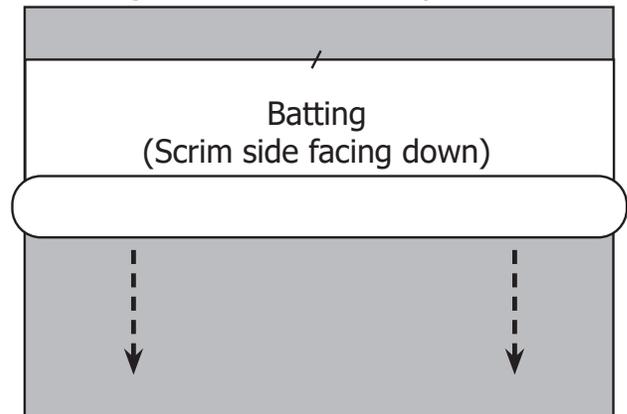
- 6 Roll up your batting and quilt top into separate rolls. Make sure the scrim side of the batting and the wrong side of the quilt top are on the outside of the rolls.



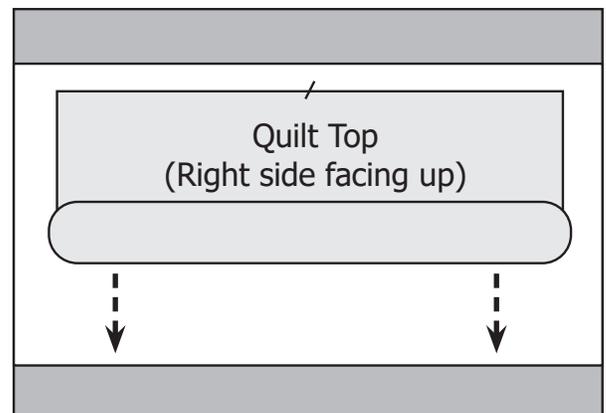
- 7 Make sure your backing fabric is flat and free of any wrinkles.



- 8 Align the first mark you made on your batting with the second mark on the backing. Unroll your quilt top on top of the batting and smooth out any wrinkles.

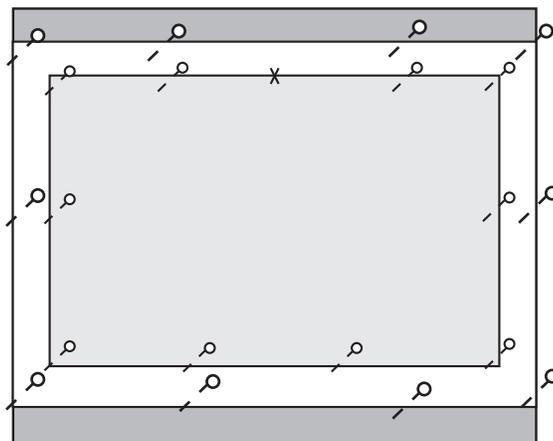


- 9 Align the mark you made on your quilt top with the second mark on the batting. Unroll your quilt top on top of the batting and smooth out any wrinkles.

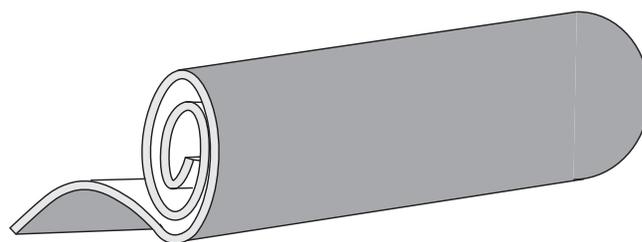
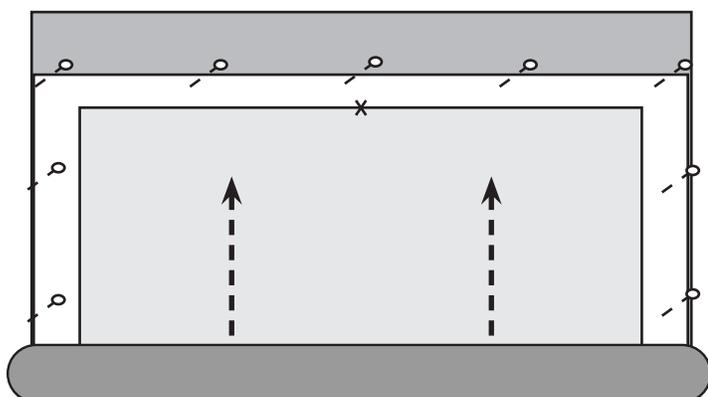


Building Your Quilt Sandwich (continued)

- 10 Pin the quilt top to the other layers. Your quilt sandwich is now ready to be placed on the frame



- 10 Roll the quilt up from the bottom.

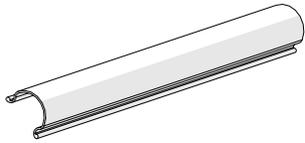


- 11 **Result:** Your quilt is assembled and ready to be taken to your frame.

Positioning the Quilt on the Frame

Parts & Tools Needed:

Front Rail Clamp

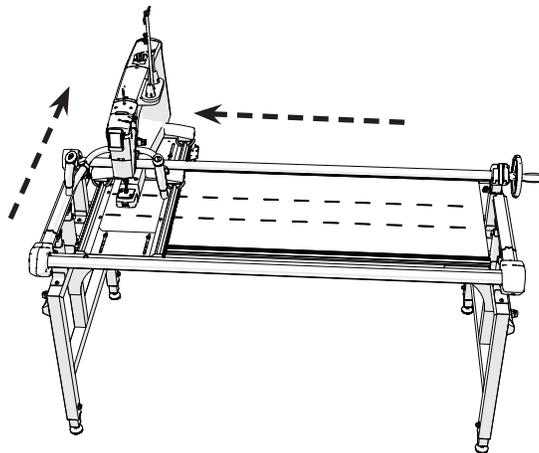


Tape
(not included)

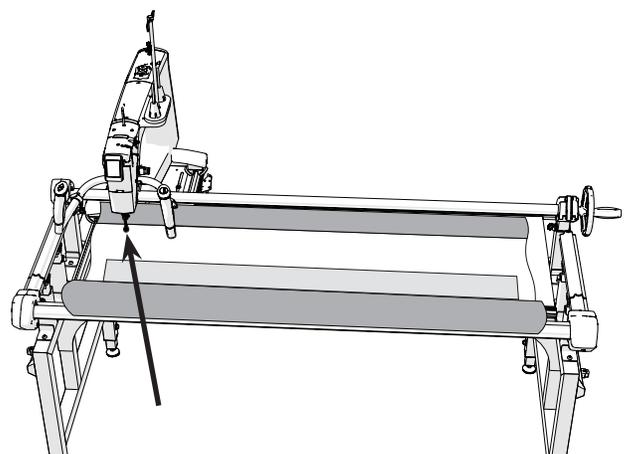
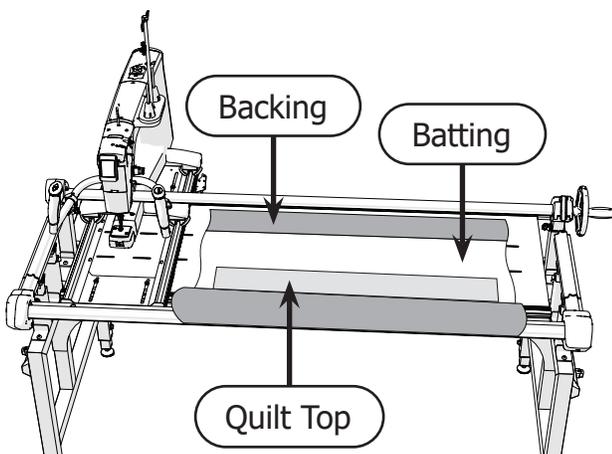
Instructions

Correct placement of the quilt on the frame ensures the machine will be able to reach the edges of the quilt top, the fabric is well-tensioned, and stitching will be square with the quilt edges. Take the following steps to position the fabric on the frame:

- 1 Move your machine to the rear left corner of the frame and make sure your needle is raised up.

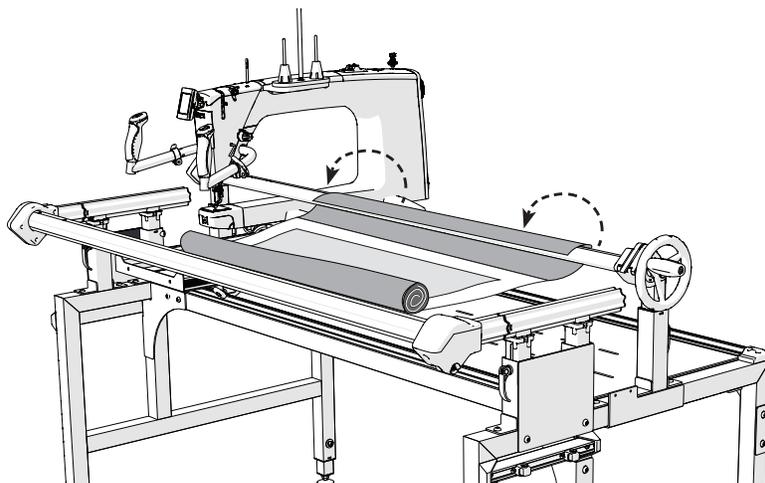


- 2 Lay the fabric over the front rail so that the edge of the backing is close to the take up rail.
Note: If you are making a wider quilt, you may need to tuck the fabric underneath the hopping foot on the machine.

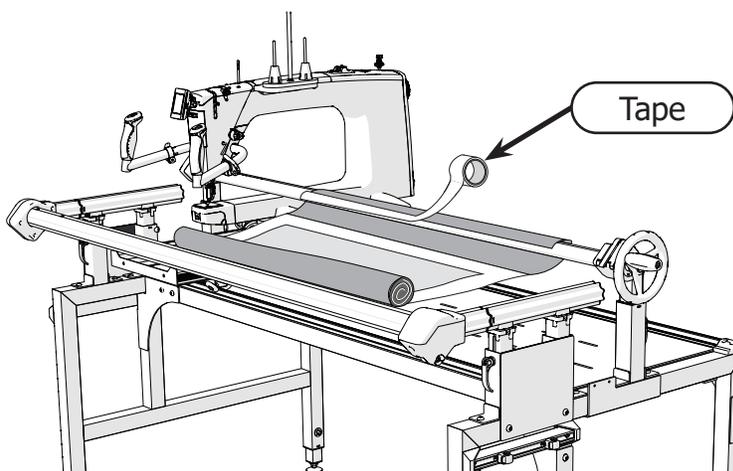


Positioning the Quilt on the Frame (continued)

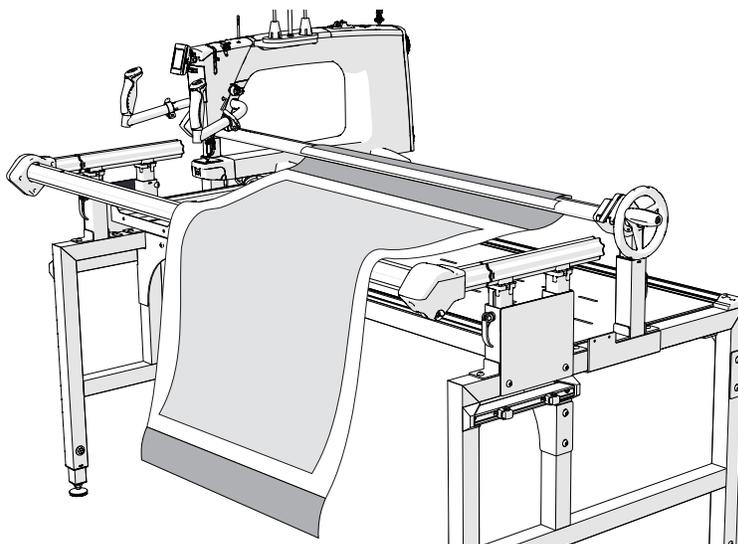
- 3 Wrap the edge of the backing fabric underneath the take-up rail and around to the top. Make sure the edge is as straight as possible.



- 4 Carefully place a line of **tape** along the edge of the backing fabric, securing it in a straight line along the take-up rail.

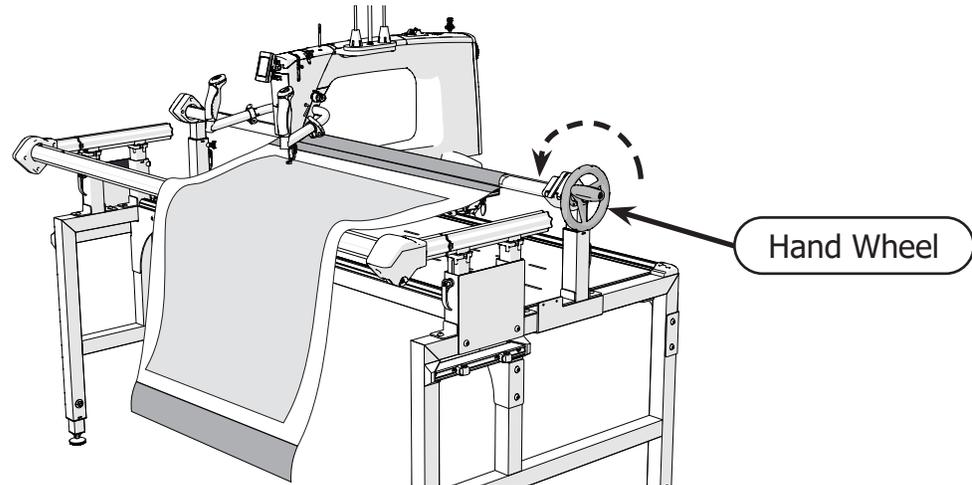


- 5 Unroll the rest of the fabric and drape it over the front rail.

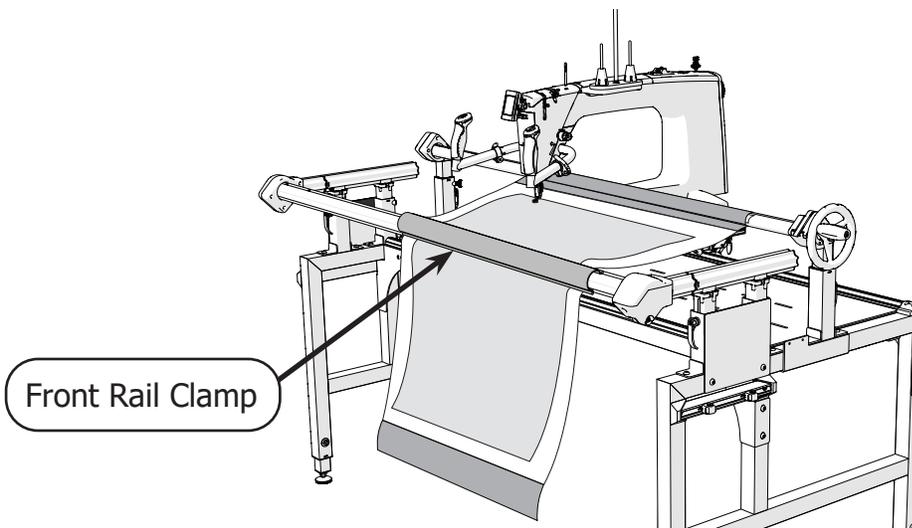


Positioning the Quilt on the Frame (continued)

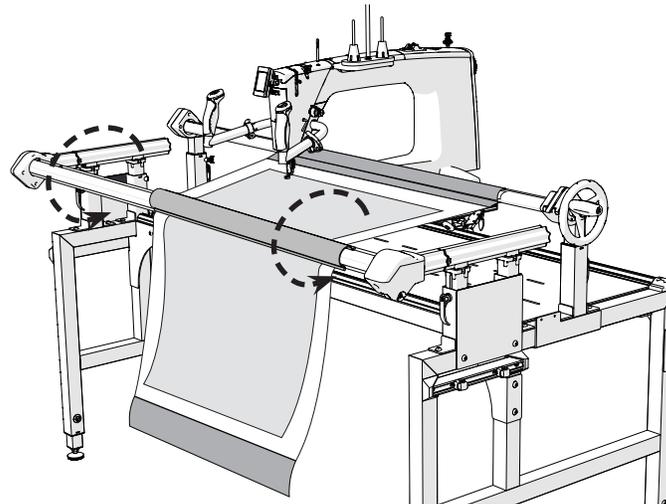
- 6 Turn the **hand wheel** counter clockwise to roll the fabric onto the take-up rail until the machine's needle can reach the top edge of the quilt top when the machine is as far back as it can go.



- 7 Use a **front rail clamp** to secure the fabric to the front rail.

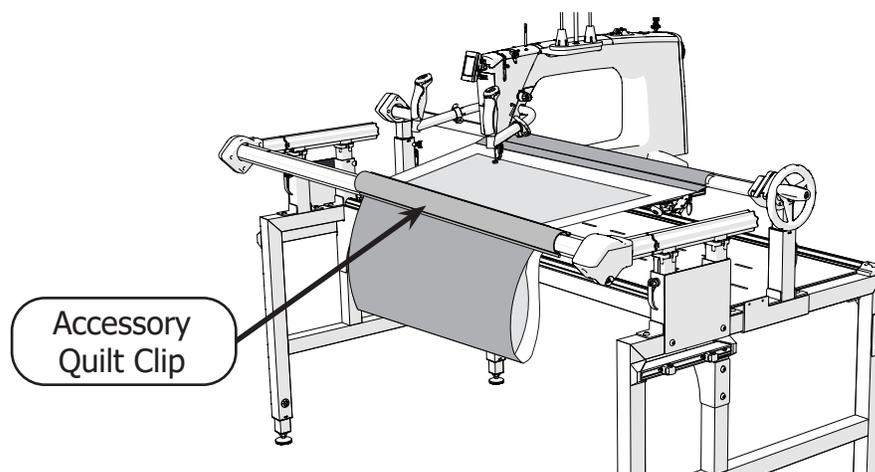


- 8 Once the clamp is attached to the front rail, you can grasp the rail and rotate it towards you to pull the fabric tight.



Positioning the Quilt on the Frame (continued)

- 9 If you are making a longer quilt, you can fold the end back over the front rail and secure it in place with an optional **quilt clips** accessory to avoid stepping on or damaging the fabric. See our website for details.



- 10 **Result:** Your quilt is positioned for quilting.

Using the Bungee Clamps

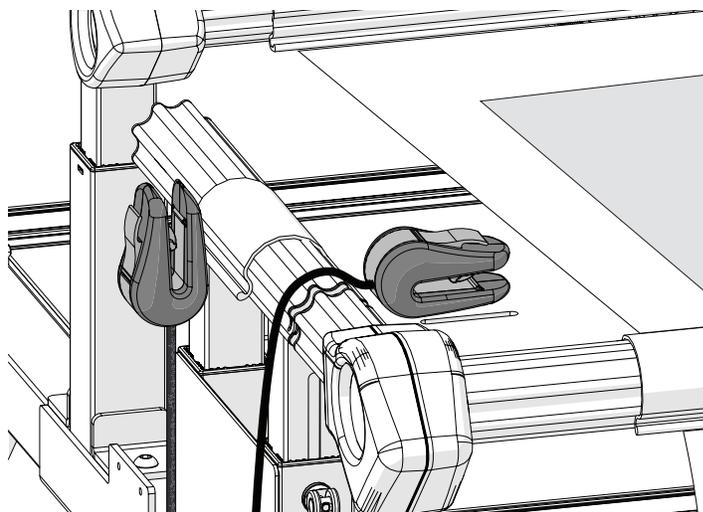
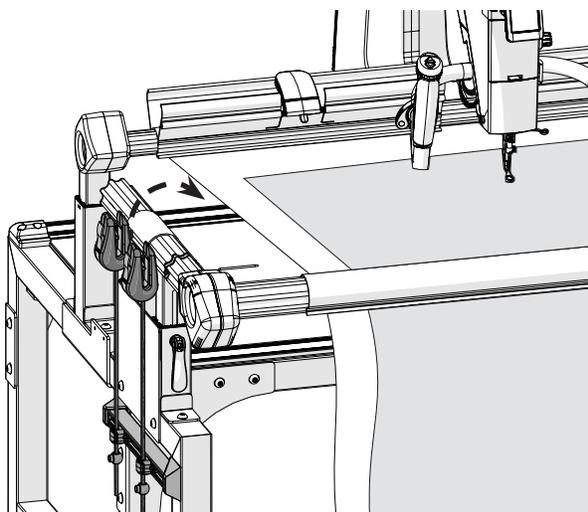
Instructions

Sometimes one edge of the fabric won't reach the side rails of the hoop, and you will need to use the bungees to attach and tension the fabric.

Note: For instructions on installing the bungee clamps, see page 38.

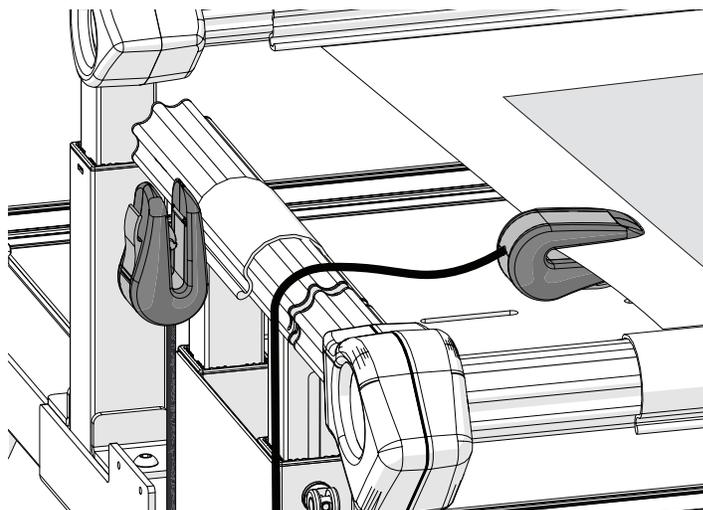
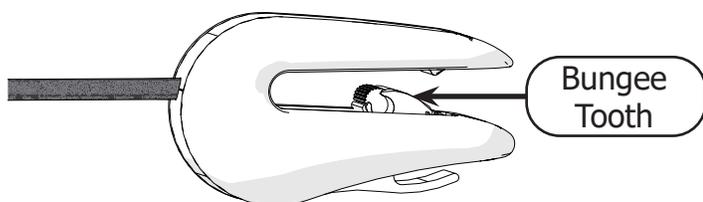
Take the following steps to use the bungees:

- 1 Pull the bungee clamp up and over the side rail.



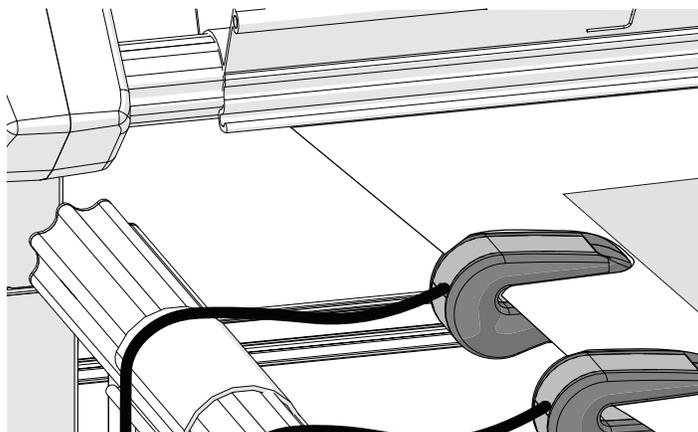
- 2 Slide the clip over the edge of the fabric. Make sure the **bungee tooth** is digging into your backing fabric, not batting.

Note: You may need to turn the clamp upside down to get the bungee tooth underneath the backing fabric.

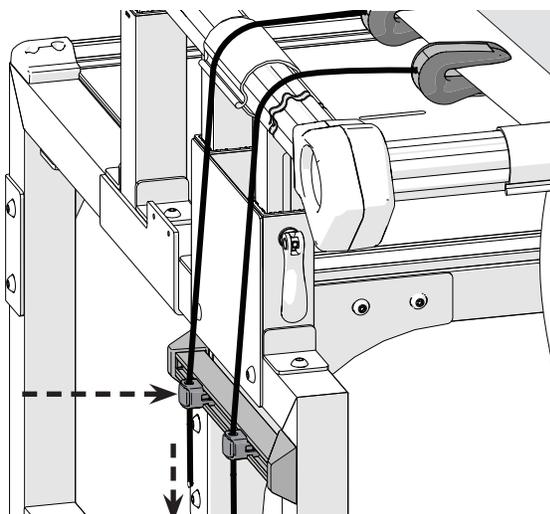


Using the Bungee Clamps (continued)

- 3 Repeat steps 1-2 for the other bungee clamp.



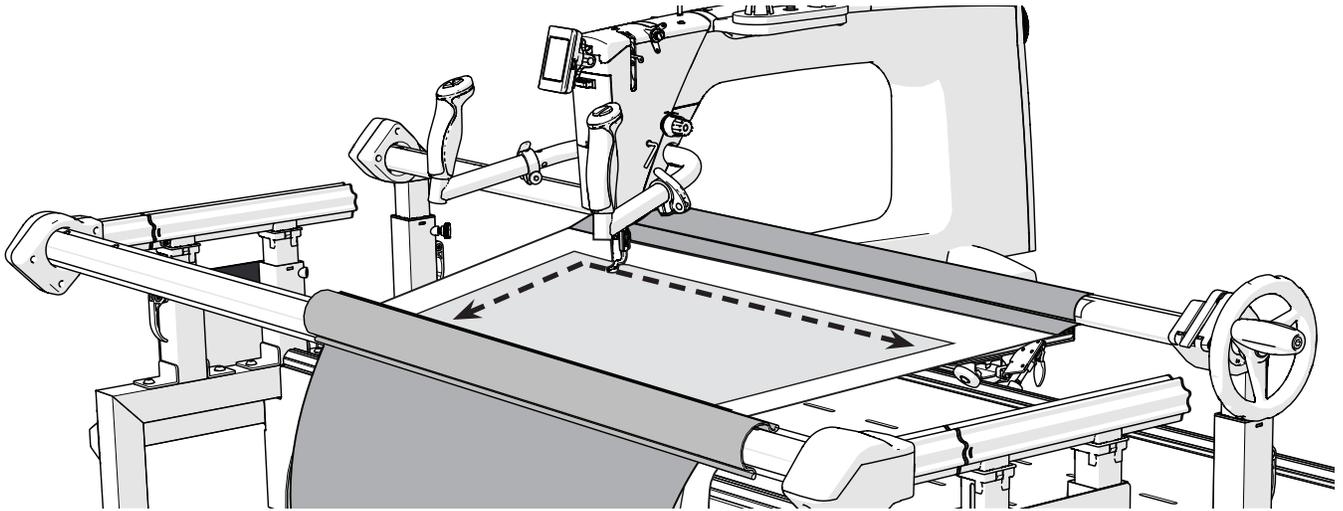
- 4 Press the button on the bungee bar and pull the cord tight so the fabric is straight and smooth.



- 5 **Result:** The bungees hold the side of the fabric tightly and smoothly.

Tacking Down Your Quilt

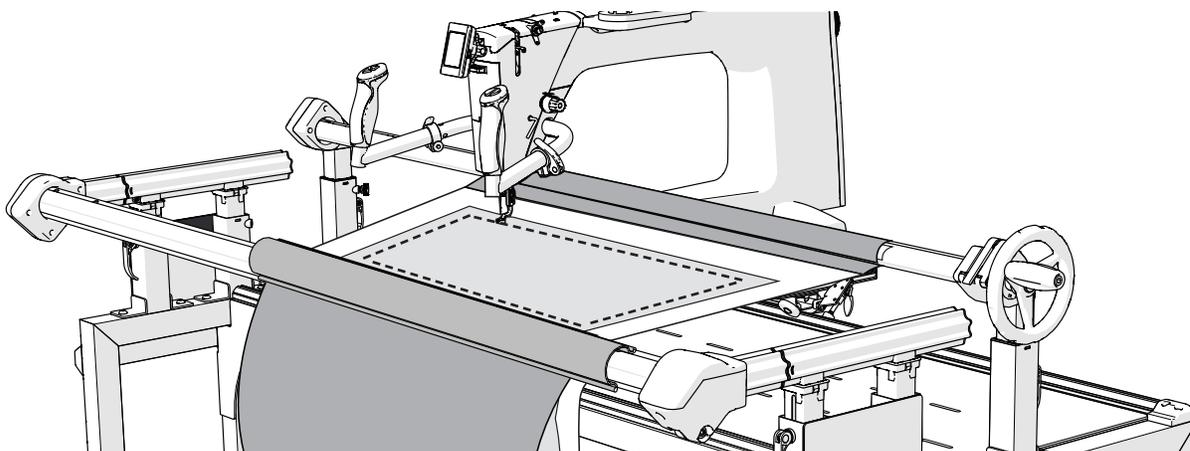
Tack down the edges and sides of the quilt about a quarter of an inch from the backing and batting.



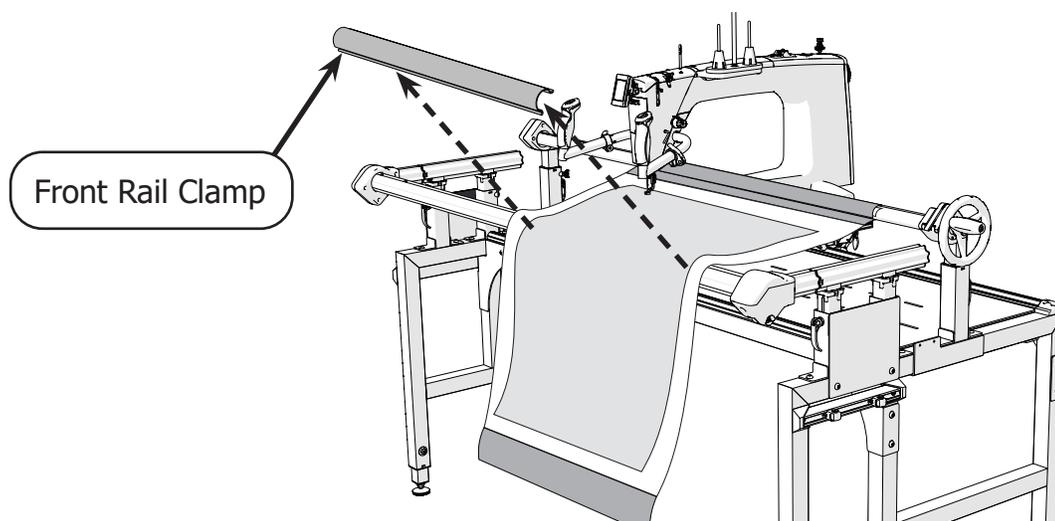
Moving Your Fabric

Instructions

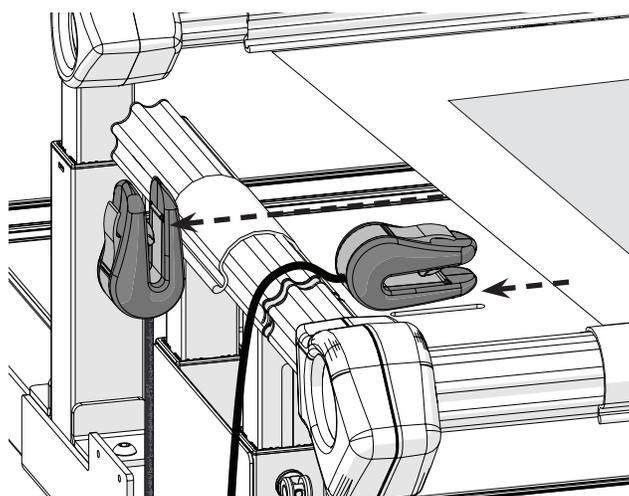
Once you've finished quilting the available space on your quilt, you will need to roll your quilt on the rails to the next unquilted area.



- 1 Remove the **front rail clamp** from the front rail of the frame.

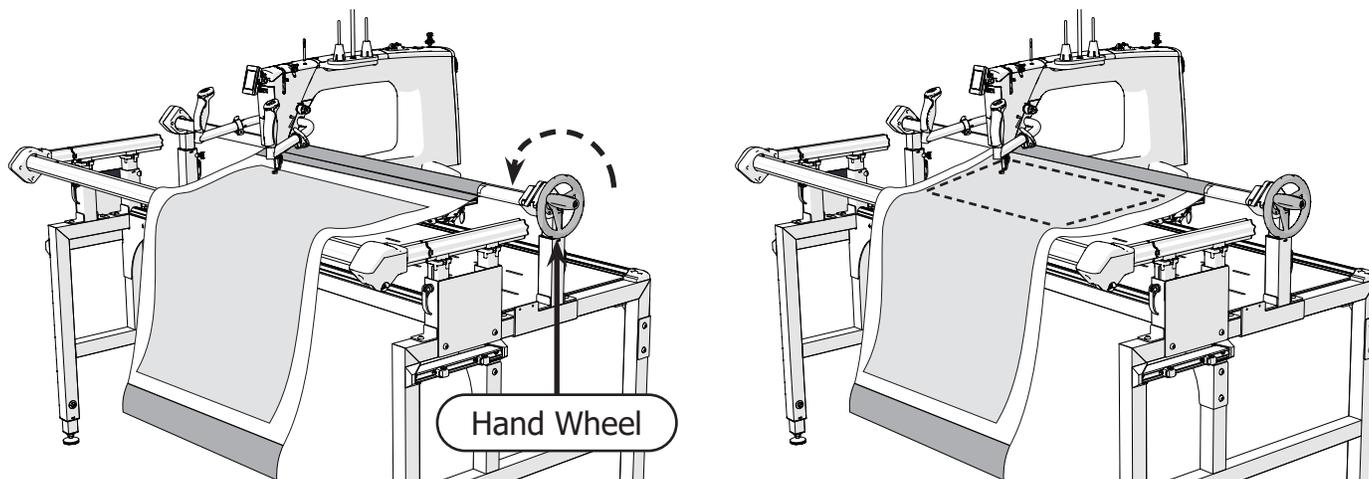


- 2 Remove the bungee clamps if they are being used.

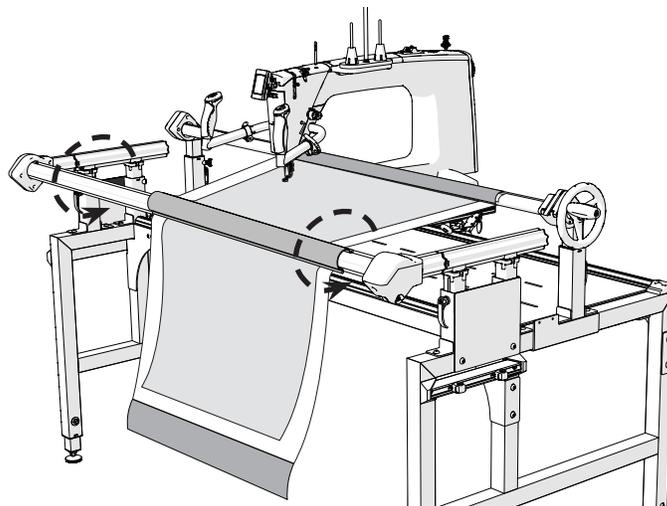


Moving Your Fabric (continued)

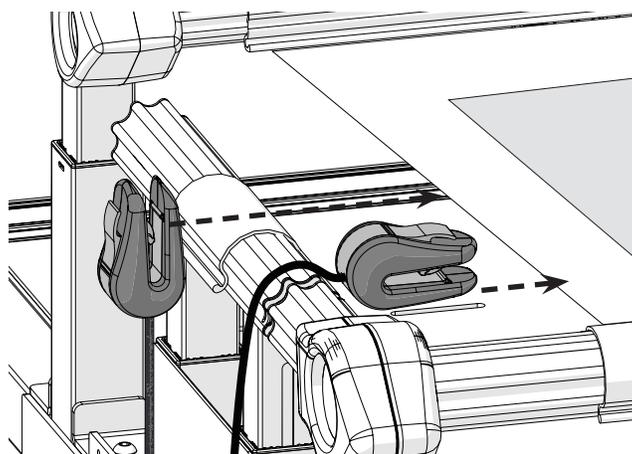
- 3 Rotate the **hand wheel** counter-clockwise to pull the fabric up onto the take-up rail until the bottom edge of your previous quilting zone is at the top of the new quilting zone.



- 4 Replace the front rail clamp to the front rail and twist the rail toward you to tighten the fabric.



- 5 Reattach the bungee clamps, if needed.



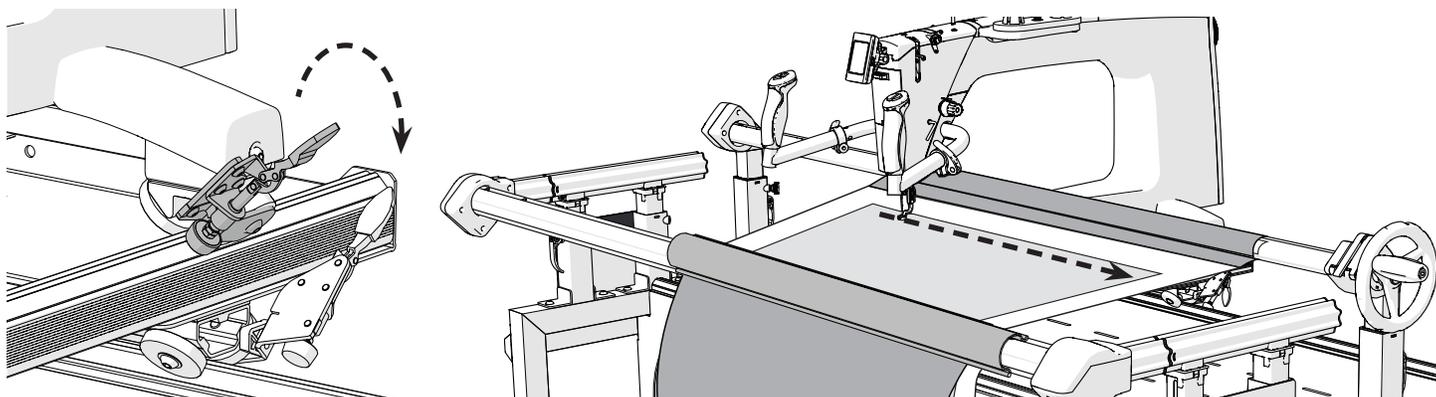
- 6 **Result:** The fabric has successfully been moved to a new zone.

Using the Channel Locks

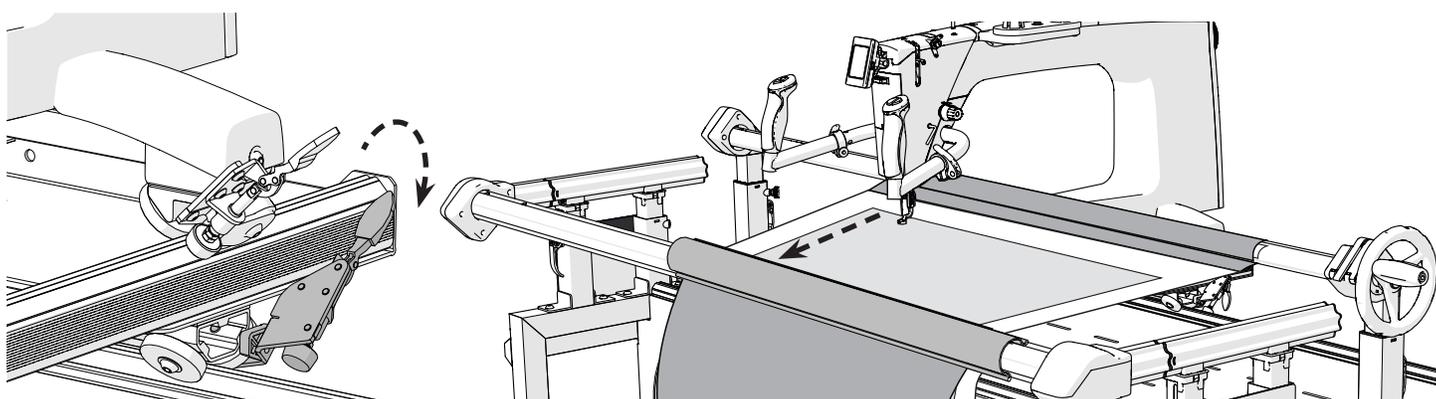
Instructions

The channel locks restrict the movement of the bottom carriage and the sewing machine or top plate so that you can easily stitch a straight line.

- To quilt a straight line horizontally across the frame, close the channel lock on the machine.



- To quilt a straight line from the front-to-back of your frame, close the channel lock on the bottom carriage.

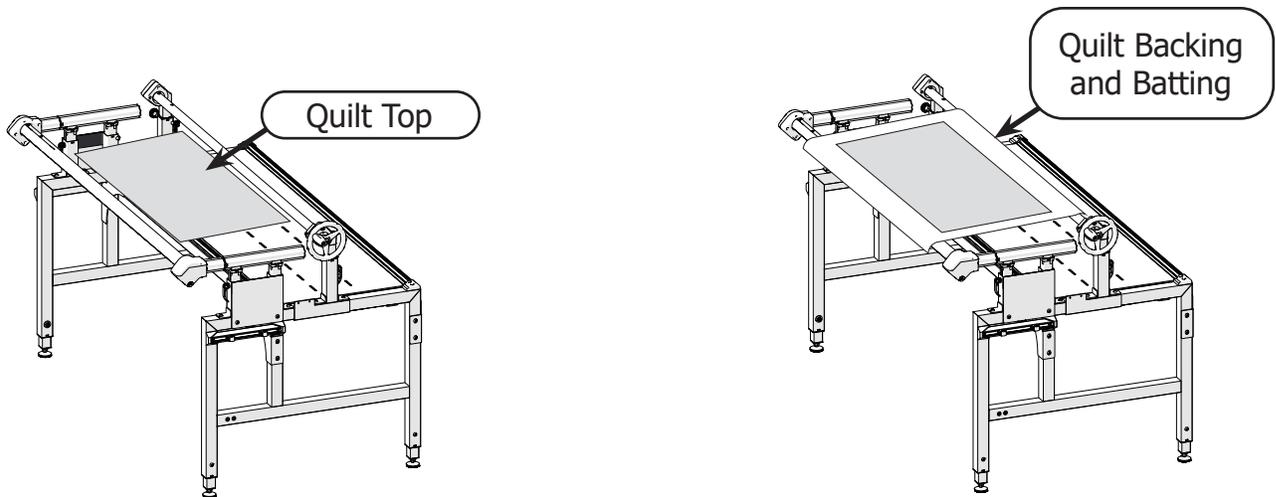


Quilts of Alternative Size and Shape

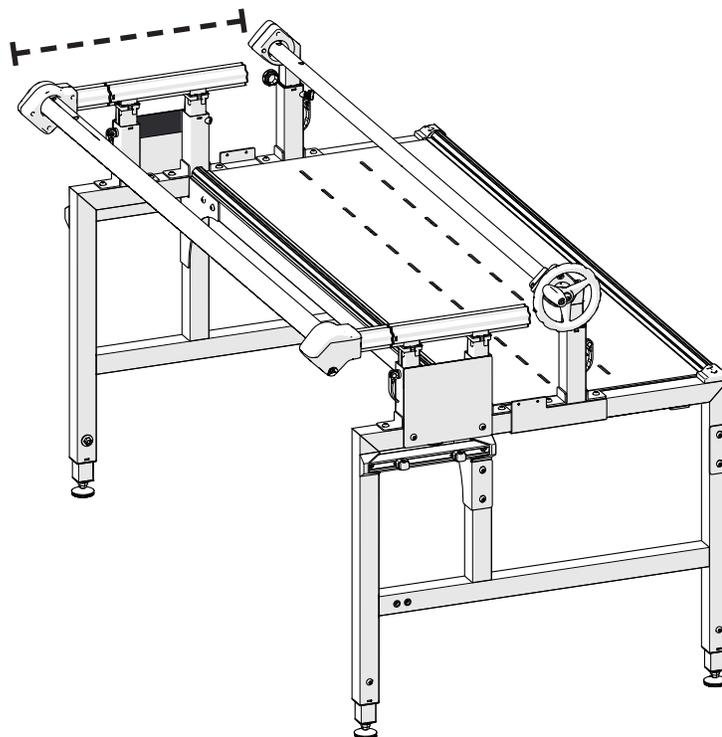
Instructions

Read these steps all the way through first to avoid making a mistake when cutting your backing and batting.

If your quilt top doesn't reach the front and back rails, you will need to cut your quilt backing to be large enough to make up the difference.

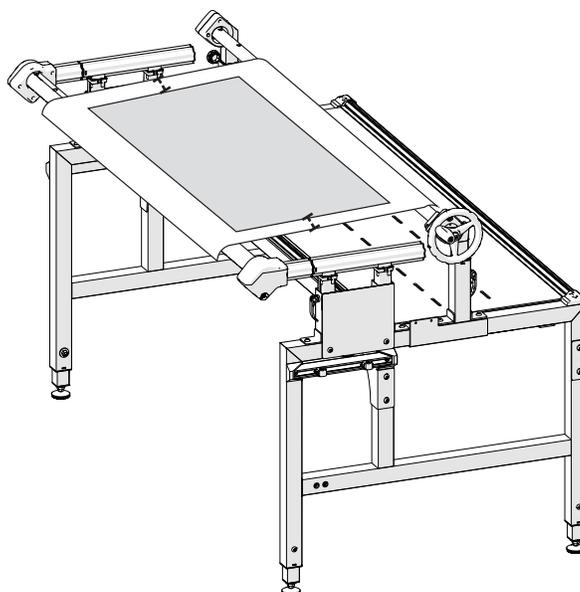


Measure the depth of your frame hoop and add 10" to get the minimum depth of your quilt back.



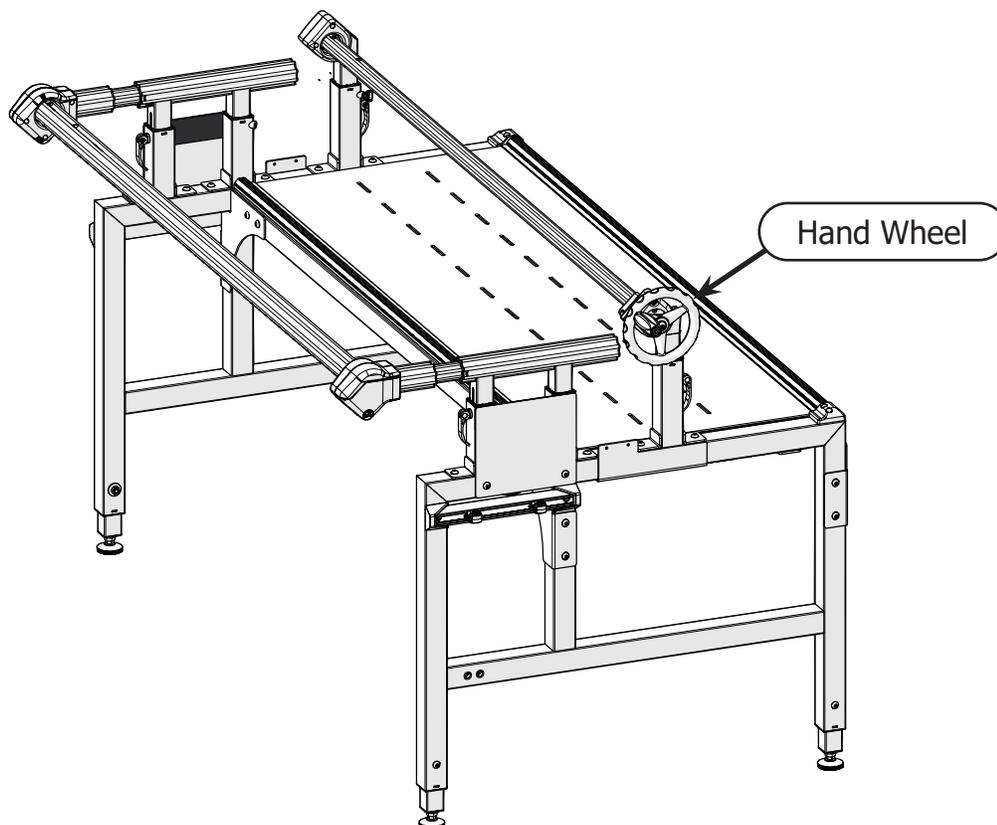
Quilts of Alternative Size and Shape (continued)

If your quilt top doesn't reach the side rails, you can cut the backing to be 6-8" wider than your quilt top so that the bungees can grasp the sides of the quilt, but won't get in the way while you sew.



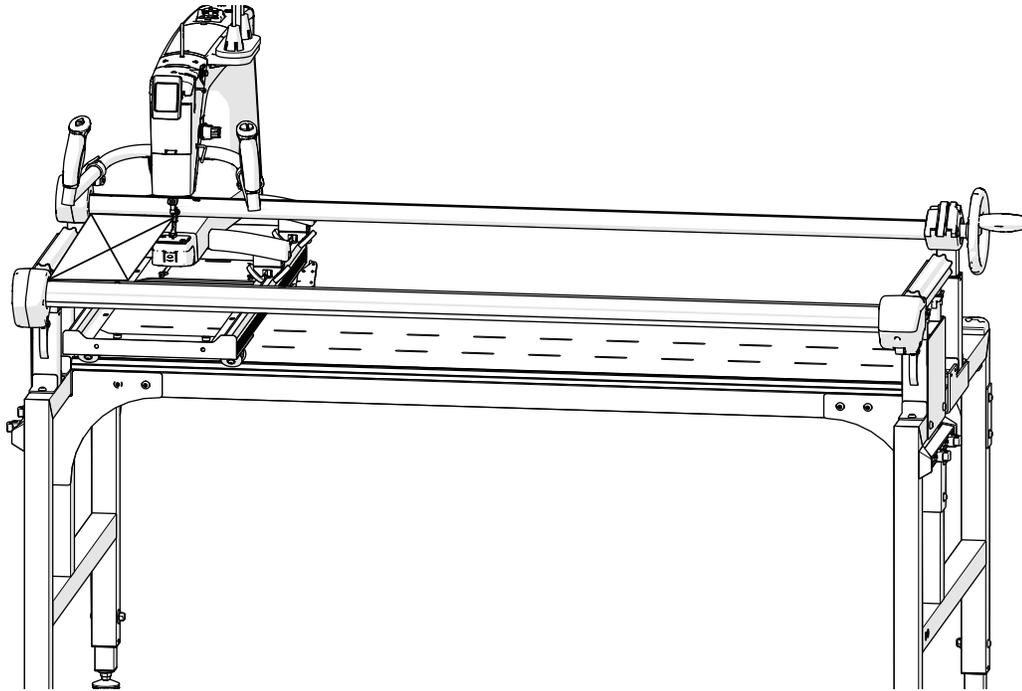
However, if your quilt top is wide enough to reach the side rails, we recommend using the frame as a hoop frame by removing the **hand wheel** and using the fabric clamps to secure the fabric to the rails.

See "Hoop-Frame Setup" on page 48.

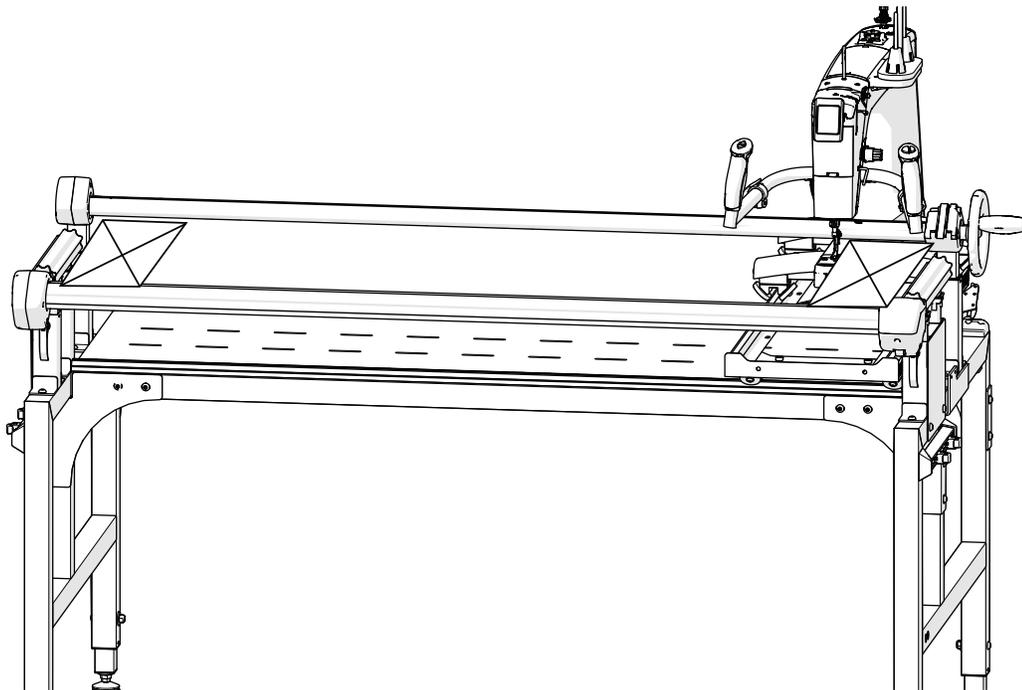


Quilts of Alternative Size and Shape (continued)

The stroke of the machine is another thing to consider when cutting your backing. Push your machine to the back-left corner of your frame. Notice that the needle doesn't reach all the way to the corner.



Move your machine to the front-right corner of the frame and you'll find the same thing. There is an area around the circumference of your frame where your machine will not be able to reach.



If any part of your quilt top ends up in the areas the machine can't reach, you won't be able to sew that part of your quilt top. Cutting the backing extra large will allow you to keep the quilt top in the quitable area of the frame.

Getting Started

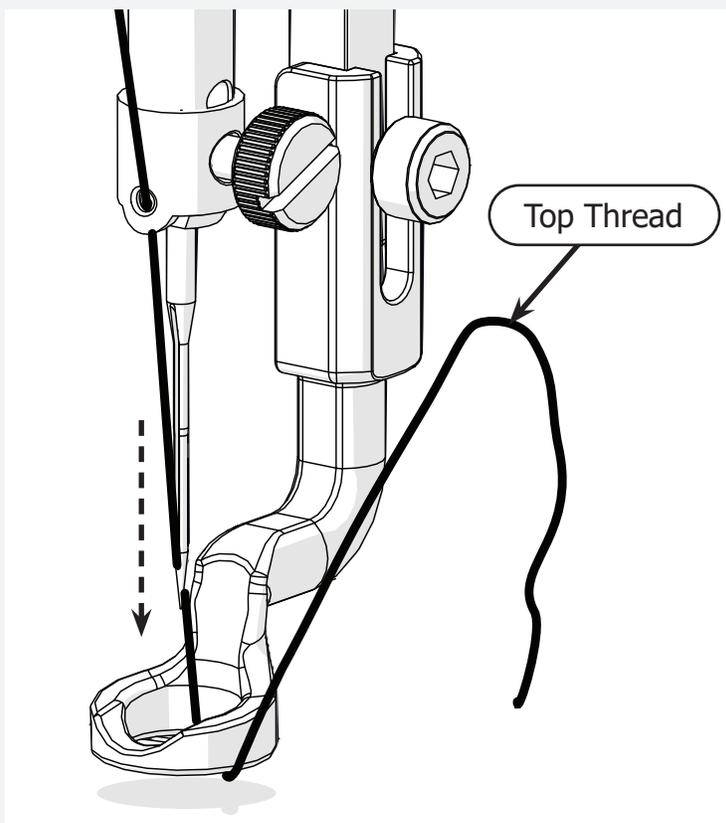
Instructions:

Once you've attached your quilt to your frame and basted down the quilt top edges for the first quilting zone, here are some helpful things to consider.

1. Over time your quilting frame may settle into a slope. If you find the machine drifts or pulls to the side, you may need to re-level the frame.
2. Keep a record of your quilt measurements. This will help when placing patterns later on.
3. Keep your quilting area clean, and wipe down your frame and carriage tracks as well as the machine and carriage wheels frequently.
4. Prepare a small test quilt that you can stitch on between bobbin changes to set your tension. This is also a great way to practice a pattern before stitching it into your quilt. The test quilt should be made of the same materials as your actual quilt, otherwise it will not work for setting tension.
5. Pull up the bobbin thread at the start of a new session of stitching, and also at the end. This will prevent the bottom thread tail from getting sewn down on the bottom of the quilt.

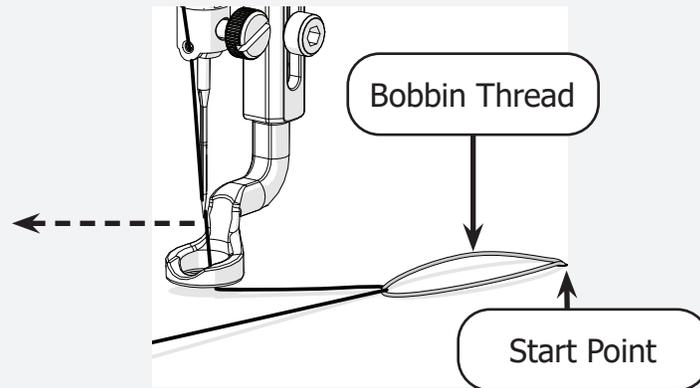
To pull up bobbin thread at the start of stitching:

- a First, position the needle directly above where you want to begin your pattern.
- b Pull on the **top thread** so that it is tight and jog the needle up and down using the single stitch button on the display.

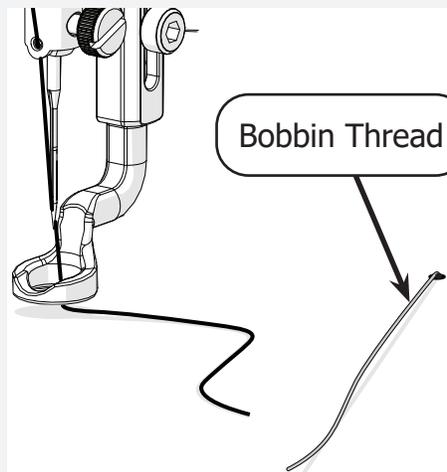


Getting Started (continued)

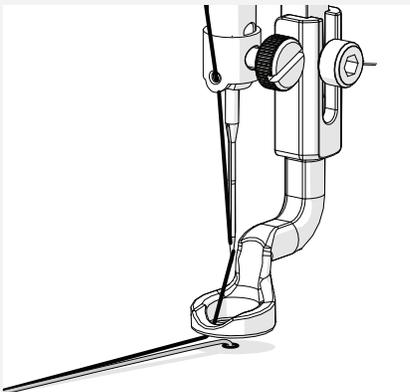
- c While still tightly holding the top thread, move the machine several inches to the side. Your top thread should pull a loop of **bobbin thread** through the **start point** to the top of the fabric.



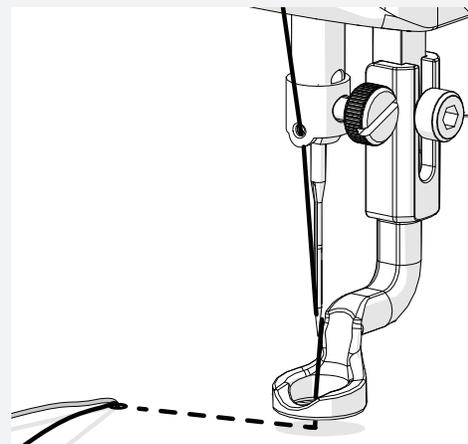
- d Pull on the loop of **bobbin thread** until the loose end of the thread comes up from underneath the fabric.



- e Pull on the bobbin thread while moving the machine back to the start point. This makes sure that there is no loose thread underneath the fabric.

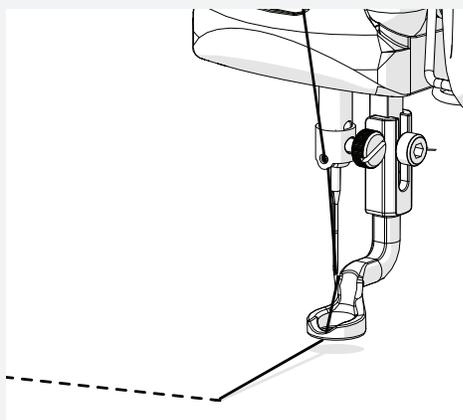


- f Make a securing stitch and begin stitching.

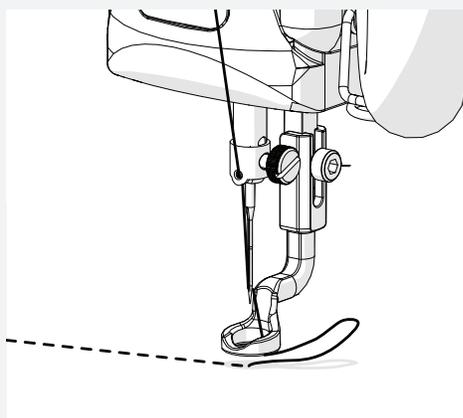


To pull up bobbin thread at the end of stitching:

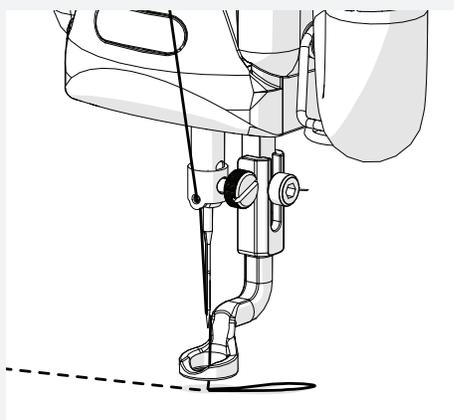
- a Move the machine away from the tie-off stitch.



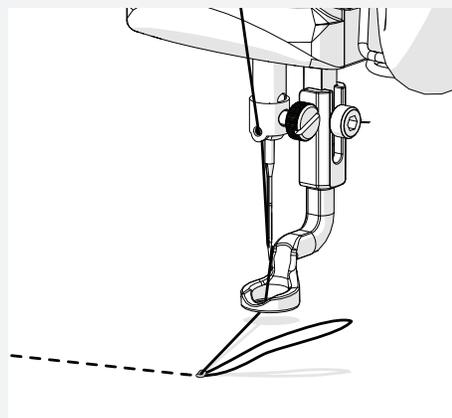
- b Hold the thread to make a loop and return the machine to the tie-off stitch.



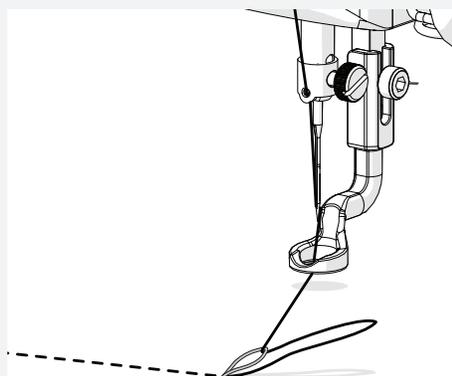
- c Make a single stitch over the tie-off.



- d Hold the loop and move the machine away from the tie-off again.



- e Keep moving away from the tie-off until a loop of bobbin thread is pulled up above the fabric. Cut all threads close to the tie-off.



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