Frame Specifications

Your frame can be set up as a full-sized frame (8 feet or 10 feet, depending upon your model), or a half-sized “crib” frame (4 feet or 5 feet). Please provide at least 3 feet of clearance around the front, back, and right side of the frame.

**Full Assembly:**

![Full Assembly Diagram]

**Crib Assembly:**

![Crib Assembly Diagram]
Included Parts & Tools

Please make sure all pieces are included in your kit.

**Box 1**

**Left Leg**

![Left Leg](image)

CII-09-14522
See page 9, 39

**Right Leg**

![Right Leg](image)

CII-09-14521
See page 9, 39

**Middle Leg**

![Middle Leg](image)

CII-09-14523
See page 9

**Inner Box**

**Front Rail Arm (Non-Ratcheting)**

![Front Rail Arm (Non-Ratcheting)](image)

CII-09-14627
See page 18, 45

**Corner Leg Brace (x4)**

![Corner Leg Brace (x4)](image)

CII-04-14503
See page 11, 40

**Front Rail Arm (Ratcheting)**

![Front Rail Arm (Ratcheting)](image)

CII-09-14626
See page 18, 45

**Middle Leg Brace (x2)**

![Middle Leg Brace (x2)](image)

CII-04-14504
See page 11

**Take-Up Rail Arm (Non-Ratcheting)**

![Take-Up Rail Arm (Non-Ratcheting)](image)

CII-09-14622
See page 18, 45

**Take-Up Rail Arm (Ratcheting)**

![Take-Up Rail Arm (Ratcheting)](image)

CII-09-14623
See page 18, 45

**Handwheel**

![Handwheel](image)

PLA-05-11550
See page 29, 55

**Handwheel Knob**

![Handwheel Knob](image)

PLA-05-11551
See page 29, 55

**Three-arm Handwheel Knob**

![Three-arm Handwheel Knob](image)

PLA-05-14600
See page 29, 55

**Handwheel Coupler**

![Handwheel Coupler](image)

PLA-05-10926
See page 29, 55

**Track Support Connector (x2)**

![Track Support Connector (x2)](image)

CNT-04-11041
See page 15

**Bungee Clamp (x4)**

![Bungee Clamp (x4)](image)

ACC-01-10261
See page 30
Allen Wrench 3 mm
HDW-03-10166
Allen Wrench 5 mm
HDW-03-10741
Allen Wrench 6 mm
HDW-03-10742
T-Handle Allen Wrench 4 mm
HDW-03-10167
Open-ended Wrench 10 mm & 13 mm
HDW-03-10743
Open-ended Wrench 14 mm & 17 mm
HDW-03-12347
M10 Washer
HDW-03-10952
See page 29, 55
Set Screw M6 x 6 mm (x8)
HDW-03-10037
See page 15
SBHCS Screw M8 x 16 mm (x36)
HDW-03-10951
See page 11, 40
SBHCS Screw M8 x 55 mm (x8)
HDW-03-10726
See page 18, 45
Shoulder Bolt M8 x 85 mm SHCS
HDW-03-11195
See page 29, 55
NOTE: Some parts will come in one of two sizes, depending on the frame. You will only receive one size of these parts.

Box 2

Long Plastic Track
8 ft or 10 ft (x4)

- 8 ft: PLA-05-11764
- 10 ft: PLA-05-10560

See page 15

Table Section 4 ft or 5 ft (x2)

- 4 ft: CII-09-14631
- 5 ft: CII-09-14630

See page 11, 40

Short Plastic Track (x4)

- 4 ft: PLA-05-11763
- 5 ft: PLA-05-11371

See page 43

Box 3

Handwheel Rail 4 ft or 5 ft

- 4 ft: CII-09-14886
- 5 ft: CII-09-14887

See page 25, 52

Ratchet Rail Section 4 ft or 5 ft (x2)

- 4 ft: CII-09-14636
- 5 ft: CII-09-14634

See page 25, 52
Non-ratchet Rail Section 4 ft or 5 ft (x3)

4 ft: CII-09-14638
5 ft: CII-09-14635
See page 25, 52

Rail Coupler (x3)

CNT-08-11865
See page 25

Box 4

Bottom Carriage

CNT-09-13523
See page 19, 46

Channel Lock (x2)

ACC-09-13507
See page 19, 46

Channel Lock Washer (x2)

CNT-04-11580
See page 19, 46

SBHCS Screw M6 x 20 mm (x2)

HDW-03-10088
See page 19, 46

Leader Cloth Set

88": CNT-08-13281
112": ACC-01-10748
See page 33, 59
Full Frame Assembly

This section describes the steps for setting up the full-sized frame. For instructions on the half-sized (crib) setup, see “Crib Frame Assembly” on page 38.

Tip: For additional help, scan the QR code below with the camera on your smartphone to visit our online support videos!

https://www.graceframe.com/en/resources/support/videos
Step 1 - Setting the Frame Height

Parts & Tools Needed:

- Left Leg
- Right Leg
- Middle Leg
- T-Handle Allen Wrench 4 mm
- Open-ended Wrench 10 mm & 13 mm
- Allen Wrench 5 mm

Instructions

The frame height is most easily adjusted prior to frame assembly. Please take the following steps:

1. **On all legs:** Loosen (do not remove) the **set screws** toward the base of each leg with the 4 mm Allen wrench.

2. **On all legs:** Remove the M8 x 55 mm SBHCS **height screws**, **washer**, and **nut** with the 10 mm open-end wrench and 5 mm Allen wrench.

**Note:** Middle leg has only one set screw.

**Note:** Middle leg has only one nut, washer, and M8 x 55 mm SBHCS height screw.
3 **On all legs:** Raise the top of the leg until the leg is the desired height. Re-install the height screws, washer and nut.

**Important:** Set all the legs to the same height hole.

4 **On all legs:** Re-tighten the **set screws** with the 4 mm Allen wrench. The middle leg has only one set screw.

**Note:** Final height may vary slightly after adjusting the leveling feet (see page 23).
Step 2 - Building the Frame Table

Parts & Tools Needed:

- Table Section (x2)
- T-Handle Allen Wrench 4 mm
- SBHCS Screw M8 x 16 mm (x36)
- Allen Wrench 5 mm
- Left Leg
- Middle Leg
- Corner Brace (x4)
- Right Leg
- Middle Leg Brace (x2)

Instructions

Attach the table tops to the frame legs by taking the following steps:

1. **On both table sections:** Use the 4 mm T-handle Allen wrench to remove eight **M6 x 8 mm connector bolts** attaching the metal track extrusions.
Full Frame Assembly

Building the Frame Table (Continued)

2 Use two **M8 x 16 mm SBHCS** screws to attach the **left frame leg** to the underside of one of the **table sections**. Tighten with the 5 mm Allen wrench.

3 Use two **M8 x 16 mm SBHCS** screws and the 5 mm Allen wrench to attach the left table section to the **middle leg**.

4 Attach one of the **corner braces** to the top left corner of the frame with the 5 mm Allen wrench and four **M8 x 16 mm SBHCS screws**.

**Note:** Keep table and leg as square as possible while attaching brace.
5 Carefully lift the table to a standing position.

6 Use two **M8 x 16 mm SBHCS** screws to attach the **right frame leg** to the underside of the remaining **table section**. Tighten with the 5 mm Allen wrench.

7 Attach one of the **corner braces** to the top right corner of the frame with the 5 mm Allen wrench and four **M8 x16 mm SBHCS screws**.

**Note:** Keep table and leg as square as possible while attaching brace.
8 Line up the two table sections and use two **M8 x 16 mm SBHCS screws** to attach the right table section to the middle leg. Tighten with the 5 mm Allen wrench.

9 Install a **middle brace** onto the front and back of the middle leg with six **M8 x 16 mm SBHCS screws** each and the 5 mm Allen wrench.

10 Install **corner braces** onto the rear corners of the frame with four **M8 x 16 mm SBHCS screws** each and the 5 mm Allen wrench.
Step 3 - Installing the Tracks

Parts & Tools Needed:

- Track Support Connector (x2) (Box 1: Inner Box)
- Set Screw M6 x 6 mm (x8) (Box 1: Inner Box)
- Allen Wrench 3 mm (Box 1: Inner Box)
- Long Plastic Track (x2) (Box 2)

- T-Handle Allen Wrench 4 mm (Box 1: Inner Box)

Instructions

The frame tracks allow the quilting machine to move across the frame. To install the frame tracks, take the following steps:

1. Slide a **track connector** into one of the **track supports** so that it passes the first two holes, but not the third.

2. Screw two **M6 x 6 mm set screws** into the track support with the 3 mm Allen wrench. Tighten until the connector is held firmly in place.
Slide another **track support** onto the **track connector**.

Use two **M6 x 6 mm set screws** and the 3 mm Allen wrench to tighten the track support firmly to the connector.

Thread each of the **plastic tracks** into the **track supports**. Repeat steps 1–5 for the remaining track supports.
Loosely connect the **track supports** to the frame with the 4 mm Allen wrench and the sixteen **M6 x 10 mm connector bolts** removed in “Step 2 - Building the Frame Table” on page 11.

6 Line up the **front track support** as close to the edge of the frame as possible and tighten the connector bolts.

7 Carefully place the bottom carriage onto the frame.

8 Slowly slide the carriage from one side of the frame to the other. Tighten each of the connector bolts in the back as the bottom carriage passes over them.
Full Frame Assembly

Step 4 - Assembling the Rail Supports

Parts & Tools Needed:

- Allen Wrench 5 mm
- SBHCS Screw M8 x 55 mm (x8)

Instructions

The rails hold and position the quilt on the frame.

1. Install the non-ratchet front rail arm and take-up rail arm on the left side of the frame using four M8 x 55 mm SBHCS screws.

2. Install the ratcheting front rail arm and take-up rail arm on the right side of the frame using four M8 x 55 mm SBHCS screws.
Step 5 - Installing the Bottom Carriage

Parts & Tools Needed:

- **Bottom Carriage**
- **T-Handle Allen Wrench 4 mm**
- **Channel Lock (x1)**
- **Channel Lock Washer (x1)**
- **SBHCS Screw M6 x 20 mm (x1)**

Instructions

Install a channel lock on the bottom carriage before placing the bottom carriage onto the frame. Channel locks assist with stitching straight lines.

Note: Instructions for using the channel locks can be found on page 70.

1. Find the front of the bottom carriage. The bolts at the front of the carriage have **taller** heads.

2. Locate the right-rear bottom carriage wheels.
Full Frame Assembly

Installing the Bottom Carriage (Continued)

3 Remove the screw attaching the outside, right-rear wheel to the bottom carriage using the 4 mm Allen wrench.

4 Screw the channel lock and washer onto the right-rear bottom carriage wheel with an M6 x 20 mm SBHCS and 4 mm Allen wrench.

5 With the channel lock in the open position, place the bottom carriage onto the frame so the wheels slide over the frame track. The channel lock should be positioned on the rear track.

STOP HERE if you are using a top plate and home sewing machine. Please follow the instructions in your top plate manual. When finished, skip to “Step 7 - Leveling the Frame” on page 23. If you are using a quilting machine, continue on to “Step 6 - Installing the Quilting Machine” on page 21.
Step 6 - Installing the Quilting Machine

Parts & Tools Needed:

- T-Handle Allen Wrench 4 mm
- SBHCS Screw M6 x 20 mm (x1)
- Channel Lock Washer (x1)
- Channel Lock (x1)

Instructions

A channel lock should be installed on your quilting machine or top carriage before it is placed on the frame. The channel locks assist with quilting straight, even lines.

1. Remove the rear wheel on the right side of your quilting machine or top carriage with the 4 mm Allen wrench.

2. Place the washer, channel lock and machine wheel onto the M6 x 20 mm SBHCS screw.

3. Use the 4 mm Allen wrench to screw the M6 x 20 mm SBHCS into the machine.

4. STOP HERE. Follow the instructions in your machine manual to fully assemble the machine. Continue with frame instructions only after machine is completed.

If using a top carriage and home sewing machine, please follow the instructions in your top carriage manual and then go to page 23.
5 With the channel lock in the open position, carefully place machine onto the bottom carriage, if not already done.
Step 7 - Leveling the Frame

Parts & Tools Needed:

Open-End Wrench

Instructions

Leveling the frame ensures the machine doesn't drift or pull to one side when stitching.

1 Move the machine and bottom carriage to one corner of the frame, and release. If the machine rolls away from the corner, use the 17 mm open-end wrench to adjust the leveling foot at the bottom of the leg.
Full Frame Assembly
Leveling the Frame (Continued)

**Leveling Foot Adjustment**

a. Loosen the top nut on the leveling foot with the 17 mm open-end wrench.

b. Turn the bottom nut with the 14 mm open-end wrench until the desired height is set.

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

2. Test the next corner of the frame, and adjust the leveling foot underneath if needed.

3. Test the middle of the frame next, and then the other two corners.
Step 8 - Installing the Rails

Parts & Tools Needed:

- **Ratchet Rail Section (x2)**
  - (Box 3)

- **Non-ratchet Rail Section (x3)**
  - (Box 3)

- **Handwheel Rail Section**
  - (Box 3)

- **T-Handle Allen Wrench 4 mm**
- **Rail Coupler (x3)**
  - (Box 3)

Instructions

The rails hold and position the quilt on the frame.

1. Slide a rail coupler into one of the non-ratchet rail section. Line up the screws on the coupler with the holes on the rail.
Full Frame Assembly

Installing the Rails (Continued)

2 Use the 4 mm Allen wrench to loosen (turn counter-clockwise) the coupler screws inside the rail until they press firmly against the rail.

3 Slide one of the ratcheting rail sections onto the other side of the rail coupler.

4 Line the coupler screws with the holes in the rail and loosen them with the 4 mm Allen wrench until they press firmly against the inside of the rail.
5 Repeat steps 1-4 with the remaining rails. One rail will be completed with the handwheel rail section in place of the ratcheting rail section.

6 Insert one of the rail's ratchet section end into the front rail arm (ratcheting side).

7 Press the other end of the rail (the non-ratchet rail side) into the front rail arm (non-ratcheting side).
8 Repeat steps 6-7 for the bottom rail.

9 Insert the **handwheel rail** through the throat of the machine.

10 Place the ratcheting side of the rail into the ratcheting take-up rail arm, and then press the non-ratcheting side into the non-ratcheting take-up rail arm.
Step 9 - Assembling the Handwheel

Parts & Tools Needed:

- **Handwheel**
- **Handwheel Knob**
- **Allen Wrench 6 mm**
- **Shoulder Bolt M8 x 55 mm SBHCS**
- **Handwheel Coupler**
- **M10 Washer**
- **Three-Armed Handwheel Knob**

Instructions

The handwheel allows you to conveniently roll the quilt up as you go.

1. Use the **handwheel shoulder bolt** and 6 mm Allen wrench to attach the **handwheel knob** to the **handwheel**.

2. Screw the **handwheel coupler**, **handwheel**, **washer**, and **three-armed handwheel knob** to the take-up rail.
Full Frame Assembly

Step 10 - Installing the Bungee Clamps

Parts & Tools Needed:

Bungee Clamp (x4)

Instructions

The bungee clamps hold the edges of the quilt up and provide additional tension to the quilt surface. Take the following steps:

1. **Note:** Your bungee clamps may have come with bungee stops. These will not be used.

2. Press down the bungee stop in the front rail arm and thread the bungee cable through. Release to tighten.

3. Repeat step 2 to install all four bungee clamps.
Step 11 - Adjusting the Rails

Parts & Tools Needed:

T-Handle Allen Wrench 4 mm

Instructions

The placement of the rails in relation to the machine is crucial for proper quilt alignment and quality sewing. For customers using the idler or batting accessory rails, please refer to the instructions that came with your accessories on how to configure your rails. For the standard setup, please take the following steps:

1. If the throat of your machine is greater than 15”, you will need to extend your front rail. Use the 4 mm Allen wrench to loosen the set screws on both the front rail arms.

2. Extend the arm out to the first notch for machines with a throat of up to 19” in length. Extend to the second notch for machines with up to a 21” throat length.

3. Re-tighten the set screws on both front rail arms with the 4 mm Allen wrench.
4 To set the front rail height, turn the knobs on the necks of both front rail arms.

5 Press in the levers to raise or lower the front rail. Set the top of the rail so it is level with the machine’s needle plate. When the height is set, re-tighten the height knobs.

6 Loosen the knobs on both take-up rail arms. Press in on the levers to set the rail height.

7 Set the take-up rail so there is just enough space to slide a finger between it and the machine. Re-tighten the knobs.
### Step 12 - Installing the Velcro Tape

**Parts & Tools Needed:**

- **Velcro Tape** (x3)
  - Found in Leader Cloth Set (Box 4)
- **Marker** (not included)

**Instructions**

Velcro strips are used to attach the leader cloth to your frame. The leader cloths help align the quilt and maximize the area of the quilt surface that the machine will be able to reach.

1. Turn all three rails so the holes on the rails face up.

2. To help keep the rails in place, twist each **rail ratchet knob** to activate the one-way ratchet.

3. Fold the **Velcro tape** in half to find and mark the center.
4. Remove some of the backing from the center of the tape and attach the tape to center of one of the rails.

5. Peel off some of the backing from the end of the tape. Use the holes on to rail to keep the tape straight, and attach it to the end of the rail.

6. Start from the center and carefully peel away the backing of the tape, flattening as you go.
Installing the Velcro Tape (Continued)

7 Now do the same for the other side of the rail.

8 Repeat steps 3–7 for the other two rails.
Step 13 - Installing Leader Cloth

Parts & Tools Needed:

- Leader Cloth Set
- Tape Measure (not included)
- Marker (not included)

Instructions

The leader cloths attach the quilt to the frame while maximizing the quilt surface that the machine can reach.

1. On all three leader cloths: Fold each cloth in half and mark the center-mark on the front and back, top and bottom, with a marker.

2. Locate the narrowest leader cloth.

3. Place the center of the narrowest leader cloth onto the Velcro tape in the center of the take-up rail, right side facing away from the frame.
4 Moving from the center outward, smooth the top edge of the leader cloth across the Velcro.

5 Repeat steps 3–4 for the medium width leader cloth on the backing rail.

6 For the widest leader cloth, repeat steps 3–4 on the top rail, but drape the leader cloth over the front of the rail, right side facing the front.
Crib Frame Assembly

This section describes the steps for setting up the half-sized (crib) frame. For instructions on the full-size setup, see page 8.

**Tip:** For additional help, scan the QR code below with the camera on your smartphone to visit our online support videos!

https://www.graceframe.com/en/resources/support/videos
Step 1 - Setting the Frame Height

Parts & Tools Needed:

- Left Leg
- Right Leg
- Open-ended Wrench 10 mm & 13 mm
- Allen Wrench 5 mm

Instructions

The frame height is most easily adjusted prior to frame assembly. Please take the following steps:

1. **On both legs:** Remove the **height screws, washer, and nut** with the 10 mm box-end wrench and 5 mm Allen wrench.

2. **On both legs:** Raise the top of the leg until the leg is the desired height. Re-install the height screws, washer and nut.

**Important:** Set all the legs to the same hole.

**Note:** Final height may vary slightly after adjusting the leveling feet (see page 50).
Step 2 - Building the Frame Table

Parts & Tools Needed:

- Table Section (x1)
- T-Handle Allen Wrench 4 mm
- Left Leg
- SBHCS Screw M8 x 16 mm (x20)
- Allen Wrench 5 mm
- Right Leg
- Corner Brace (x4)

Instructions

Attach a table section to the frame legs by taking the following steps:

1. Use the 4 mm T-handle Allen wrench to remove eight M6 x 8 mm connector bolts attaching the metal track extrusions to the table section.
2 Use two **M8 x 16 mm SBHCS screws** to attach the **left frame leg** to the underside of the **table section**. Tighten with the 5 mm Allen wrench.

3 Use two **M8 x 16 mm SBHCS screws** to attach the **right frame leg** to the other side of the **table section**. Tighten with the 5 mm Allen wrench.

4 Install the corner braces onto the front of the left and right frame legs with eight **M8 x 16 mm SBHCS screws** and the 5 mm Allen wrench.

**Note:** Keep tables and legs as square as possible while attaching braces.
5 Carefully lift the table to a standing position.

6 Install the corner braces onto the rear of the left and right frame legs with eight M8 x 16 mm SBHCS screws and the 5 mm Allen wrench.

Note: Keep table and leg as square as possible while attaching brace.
Step 3 - Installing the Tracks

Parts & Tools Needed:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Plastic Track (x4)</td>
<td></td>
</tr>
<tr>
<td>T-Handle Allen Wrench 4 mm</td>
<td></td>
</tr>
<tr>
<td>Track Supports (x2)</td>
<td></td>
</tr>
<tr>
<td>Connector Bolts</td>
<td></td>
</tr>
</tbody>
</table>

Instructions

The frame tracks allow the quilting machine to move across the frame.

1. Thread two of the plastic tracks into each of the track supports.
2 Loosely connect the track supports to the frame with the **M6 x 10 mm connector bolts** (removed in “Step 2 - Building the Frame Table” on page 40) and the 4 mm Allen wrench.

3 Line up the **front track support** as close to the edge of the frame as possible and tighten the connector bolts.

4 Carefully place the **bottom carriage** onto the frame.

5 Slowly slide the carriage from one side of the frame to the other. Tighten each of the connector bolts in the back as the bottom carriage passes over them.
**Step 4 - Assembling the Rail Supports**

**Parts & Tools Needed:**

- Front Rail Arm (Non-Ratcheting)
- Front Rail Arm (Ratcheting)
- Take-Up Rail Arm (Non-Ratcheting)
- Take-Up Rail Arm (Ratcheting)

- SBHCS Screw M8 x 55 mm (x8)
- Allen Wrench 5 mm

**Instructions**

The rails hold and position the quilt on the frame.

1. Install the **non-ratchet front rail arm** and **take-up rail arm** on the left side of the frame using four **M8 x 55 mm SBHCS screws**.

2. Install the **ratcheting front rail arm and take-up rail arm** on the right side of the frame using four **M8 x 55 mm SBHCS screws**.
# Crib Frame Assembly

## Step 5 - Installing the Bottom Carriage

### Parts & Tools Needed:

<table>
<thead>
<tr>
<th>Bottom Carriage</th>
<th>SBHCS Screw M6 x 20 mm (x1)</th>
<th>Channel Lock Washer (x1)</th>
<th>Channel Lock (x1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Bottom Carriage" /></td>
<td><img src="image2" alt="SBHCS Screw M6 x 20 mm" /></td>
<td><img src="image3" alt="Channel Lock Washer" /></td>
<td><img src="image4" alt="Channel Lock" /></td>
</tr>
</tbody>
</table>

### Instructions

Install a channel lock on the bottom carriage before placing the bottom carriage onto the frame. The channel locks assist with stitching straight lines.

1. Find the front of the bottom carriage. The bolts at the front of the carriage have taller heads.

2. Locate the right-rear bottom carriage wheels.

3. Remove the screw attaching the outside, right-rear wheel to the bottom carriage.

4. Screw the channel lock into the right-rear bottom carriage wheel.
With the channel lock in the open position, place the bottom carriage onto the frame so the wheels slide over the frame track. The channel lock should be positioned on the rear track.

**STOP HERE** if you are using a top plate and home sewing machine. Please follow the instructions in your top plate manual. When finished, skip to “Step 7 - Leveling the Frame” on page 50. If you are using a quilting machine, continue on to “Step 6 - Installing the Quilting Machine” on page 48.
Crib Frame Assembly

Step 6 - Installing the Quilting Machine

Parts & Tools Needed:

- T-Handle Allen Wrench 4 mm
- SBHCS Screw M6 x 20 mm (x1)
- Channel Lock Washer (x1)
- Channel Lock (x1)

Instructions

A channel lock should be installed on your quilting machine or top carriage before it is placed on the frame. The channel locks assist with quilting straight lines.

1. Remove the rear wheel on the right side of your quilting machine or top carriage with the 4 mm Allen wrench.

2. Place the washer, channel lock and machine wheel onto the M6 x 20 mm SBHCS screw.

3. Use the 4 mm Allen wrench to screw the M6 x 20 mm SBHCS into the machine.

4. **STOP HERE.** Follow the instructions in your machine manual to fully assemble the machine. Continue with frame instructions only after machine is completed.
With the channel lock in the open position, carefully place machine onto the bottom carriage, if not already done.
Crib Frame Assembly

Step 7 - Leveling the Frame

Parts & Tools Needed:

Open-End Wrench
14 & 17 mm

Instructions

Leveling the frame ensures the machine doesn’t pull away when stitching.

1 Move the machine and bottom carriage to one corner of the frame, and release. If the machine rolls away from the corner, use the 14 & 17 mm open-end wrench to adjust the leveling foot at the bottom of the leg.
Leveling the Frame (Continued)

Leveling Foot Adjustment

1. Loosen the top nut on the leveling foot with the 17 mm open-end wrench.

2. Turn the bottom nut with the 14 mm open-end wrench until the desired height is set.

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

2. Test the next corner of the frame, and adjust the leveling foot underneath if needed.

3. Test the other two corners.
Step 8 - Installing the Rails

Parts & Tools Needed:

- Ratchet Rail Section (x2)
  
- Non-ratchet Rail Section (x3)
  
- Handwheel Rail
  
- Allen Wrench 6 mm

Instructions

The rails hold and position the quilt on the frame.

1. **On all non-ratchet rail sections:** Use the 6 mm Allen wrench to loosen the M10 x 80 mm SBHCS screw.

2. Remove the non-ratchet rail end from the metal tube.
3 Use the 6 mm Allen wrench to screw the non-ratchet rail ends to the free ends of the ratchet rails and the handwheel rail.

4 Insert one of the rail’s ratchet rail ends into the front rail arm (ratcheting side).

5 Press the other end of the rail (the non-ratchet rail side) into the front rail arm (non-ratcheting side).
6 Repeat steps 4–5 for the bottom rail.

7 Insert the handwheel rail through the throat of the machine, handwheel side first.

8 Place the ratcheting side of the rail into the ratcheting take-up rail arm, and then press the non-ratcheting side into the non-ratcheting take-up rail arm.
**Step 9 - Assembling the Handwheel**

**Parts & Tools Needed:**

- **Handwheel**
- **Handwheel Knob**
- **Allen Wrench 6 mm**
- **Handwheel Coupler**
- **Shoulder Bolt M8 x 55 mm SBHCS**
- **M10 Washer**
- **Triangular Knob**

**Instructions**

The handwheel allows you to easily roll your quilt up as you sew.

1. Use the **handwheel shoulder bolt** and 6 mm Allen wrench to attach the **handwheel knob** to the **handwheel**.

2. Screw the **handwheel coupler**, **handwheel**, **washer**, and **three-armed handwheel knob** to the handwheel rail.
Step 10 - Installing the Bungee Clamps

Parts & Tools Needed:

**Bungee Clamp (x4)**

Instructions

The bungee clamps hold the edges of the quilt up and provide additional tension to the quilt surface. Take the following steps:

1. **Note:** Your bungee clamps may have come with **bungee stops**. These will not be used.

2. Press down the bungee stop in the front rail arm and thread the bungee cable through. Release to tighten.

3. Repeat step 2 to install all four bungee clamps.
Step 11 - Setting the Rail Distances

Parts & Tools Needed:

- T-Handle Allen Wrench 4 mm

Instructions

The placement of the rails in relation to the machine is crucial for proper quilt alignment and quality sewing. For customers using the idler or batting accessory rails, please refer to the instructions that came with your accessories on how to configure your rails. For the standard setup, please take the following steps:

1. If the throat of your machine is greater than 15”, you will need to extend your front rail to accommodate the machine. Use the 4 mm Allen wrench to loosen the set screws on both front rail arms.

2. Extend the arm out to the first notch for machines with a throat of up to 19” in length. Extend to the second notch for machines with up to a 21” throat length.

3. Re-tighten the set screws on both front rail arms with the 4 mm Allen wrench.
4 To set the front rail height, turn the knobs on the necks of both front rail arms.

5 Press in the **levers** to raise or lower the front rail. Set the top of the rail so it is level with the machine’s needle plate. When the height is set, re-tighten the height knobs.

6 Loosen the knobs on both take-up rail arms. Press in on the **levers** to set the rail height.

7 Set the take-up rail so there is just enough space to slide a finger between it and the machine. Re-tighten the knobs.
Step 12 - Installing the Velcro Tape

Parts & Tools Needed:

- Velcro Tape (x2)
- Scissors (not included)
- Tape Measure (not included)
- Marker (not included)

Instructions

Velcro strips are used to attach the leader cloth to your frame. The leader cloths help align the quilt and maximize the area of the quilt surface that the machine will be able to reach.

1. Turn all three rails so the holes on the rails face up.

2. To help keep the rails in place, twist each rail ratchet knob to activate the one-way ratchet.

3. On two pieces of Velcro tape: Fold the Velcro tape in half to find and cut the Velcro into two pieces at the center.
Crib Frame Assembly

Installing the Velcro Tape (Continued)

4 **On three halves of cut Velcro tape:**
Fold the Velcro tape in half again and mark out the center with your marker.

5 **On all three rails:** Lay a tape measure flat across the rail, aligning it with the holes on the top. Find and mark the center point.

6 Peel away a portion of the backing from the center of the Velcro tape, and attach the center of the tape to the center of the rail.

7 Peel off some of the backing from the end of the tape. Use the holes on to rail to keep the tape straight, and attach it to the end of the rail.

8 Start from the center and carefully peel away the backing of the tape, flattening as you go.

9 Now do the same for the other side of the rail.
Repeat steps 6–9 for the other two rails.
Crib Frame Assembly

Step 13 - Installing Leader Cloth

Parts & Tools Needed:

- Leader Cloth Set
- Scissors or Rotary Cutter (not included)
- Tape Measure (not included)
- Marker (not included)

Instructions
The leader cloths attach the quilt to the frame while maximizing the quilt surface that the machine can reach.

1. **On all three leader cloths**: Fold the cloth in half and cut along the fold.

2. Take one of the halves of the **narrowest leader cloth** and fold it in half again. Mark the center point on the front and back of the cloth.

3. Place the center of the **narrowest leader cloth** onto the center of the **take-up rail**, right side facing away from the frame.

**Note**: After cutting leader cloths it will not be possible to use the full setup for the frame without purchasing new leader cloths.

**Note**: Image showing full setup. Step is the same for the crib setup.
4 Moving from the center outward, spread the top edge of the leader cloth across the Velcro.

**Note:** Image showing full setup. Step is the same for the crib setup.

5 Repeat steps 2–4 for the medium width leader cloth on the backing rail.

**Note:** Image showing full setup. Step is the same for the crib setup.

6 For half of the widest leader cloth, repeat steps 2–4, but drape the leader cloth over the front of the top rail, right side facing the front.

**Note:** Image showing full setup. Step is the same for the crib setup.
Using Your Frame

This section describes how to attach fabric and how to use the channel locks.
# Sizing the Quilt Backing and Batting

## Parts & Tools Needed:

- Pins (not included)
- Fabric (not included)
- Tape Measure (not included)

## Instructions

The quilt backing and batting must be properly sized for neat quilting.

1. Measure the length and width of your quilt top.

2. Cut your quilt batting so that it is 2-3 inches larger than the quilt top on all sides.

3. Cut your quilt backing so it is 6-8 inches larger than the quilt top.

4. Write down the lengths and width of the batting and backing so that when you place your quilt, you can make sure it is centered and arranged as shown below.
Attaching the Fabric

Parts & Tools Needed:

Pins (not included)
Fabric (not included)

Instructions
Take the following steps to properly mount your quilt on the frame:

1. Fold your quilt’s backing in half to find the center. Place a pin to mark the top and bottom center points.

2. Pin the bottom center-point of your quilt backing to the center-point at the bottom of the leader cloth on the backing rail, with the right side facing the front.

3. Work from the center out and pin the edges of the quilt backing and leader cloth together.

4. Roll the backing rail until the leader cloth is no longer visible. Take your time to smooth out the wrinkles and keep the backing straight.
5 Pin the top center-point of your quilt backing to the center-point on the take-up rail leader cloth.

6 Work from the center out and pin the edges of the quilt backing and leader cloth together.

7 Roll the backing rail until the quilt backing is smooth and free of creases.

8 Fold your batting to locate the top center-point. Place a pin to mark it.

9 Pin the top center of your batting 4-5” below to the top center of the quilt backing.

10 Working from the center out, pin the batting across the top edge of the quilt backing.
Using Your Frame
Attaching the Fabric (Continued)

11 Drape the bottom of the batting between the **backing** and top **rails**.

12 Fold your quilt top to locate the top **center-point**. Place a pin to mark it.

13 Pin the center of your quilt top 2-3” below the top center of the batting. The right side of your quilt should face up.

14 Pin down the top of the quilt from the center out.

15 Pin the bottom of the quilt top to the bottom of the final leader cloth. Start from the center and work outward.

16 Roll the top **rail** until the quilt top is smooth and free of creases. Do not pull too tight: excess tension will cause fabric to bunch around stitches when removed from frame.
To hold up the edges of the quilt, slide the fabric into the bungee clamps. Tension by pressing down on the bungee stops and pulling the bungee tail.

Roll up your quilt as you go. Turn the top knobs on the front rails to release the quilt tension. Then ratchet up the take-up rail.

To return to a place you’ve already quilted and rolled up, loosen knobs on all the rails. Then roll up the fabric on two front rails.
Using Your Frame

Using the Channel Locks

Instructions

The channel locks assist with stitching in a straight line by inhibiting the movement of the bottom carriage or machine.

1 **On both channel locks:** Flip down the arm on the machine channel lock to close the channel lock.

2 **On both channel locks:** If the rubber foot doesn’t reach the bottom carriage track, twist it to extend it until it does.

3 **On both channel locks:** To prevent the rubber foot from loosening over time, use 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**.
4 To move the machine back and forth on the bottom carriage and create a straight vertical line, close only the bottom carriage channel lock.

5 To move the machine across the frame and create a straight horizontal line, close only the channel lock on the machine.

6 Open both channel locks to resume unrestricted quilting.
The Grace Company
2225 South 3200 West
Salt Lake City, UT 84119
Phone: 1-800-264-0644
Fax: 801-908-8888
www.graceframe.com