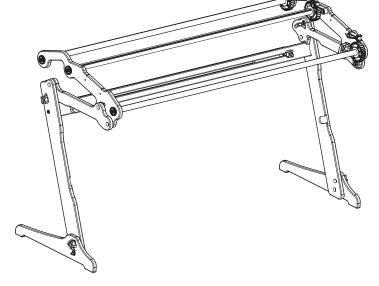
THE GRACE EZ3 FABRI-FAST QUILTING FRAME

TABLE OF CONTENTS

CARE, FINISHING AND STORAGE	2
WARRANTY	2
PARTS LIST	3-4
ASSEMBLY STEPS	
STEP 1: HARDWARE TO LEG ASSEMBLY	5
STEP 2: HARDWARE TO TILT HEAD	6
STEP 3: FEET TO LEG ASSEMBLY	7
STEP 4: TILT HEAD TO LEG ASSEMBLY	8
STEP 5: RAIL MOUNT END TO TILT HEAD/LEG ASSEMBLY	9
STEP 6: HARDWARE TO BRACE ASSEMBLY	10
STEP 7: BRACE ASSEMBLY	10
STEP 8: BRACE TO RIGHT AND LEFT SIDE ASSEMBLY	
STEP 9: RATCHET WHEELS AND RAIL ASSEMBLY	12
STEP 10: RAIL TO FRAME ASSEMBLY	13
STEP 11: RATCHET STOP ASSEMBLY.	14
TILTING YOUR EZ3 FABRI-FAST	15
FOLDING AND STORING YOUR EZ3 FABRI-FAST	16
QUILTING INSTRUCTIONS AND TIPS	17
FABRIC INSTALLATION METHOD #1: MAKING AND USING CLOTH LEADERS	17
FABRIC INSTALLATION METHOD #2: FABRIC DIRECT TO RAILS	22
MAKING AND USING THE SIDE TENSION FABRIC	23
TROUBLE SHOOTING TIPS	24
SPECIAL TIPS FOR TYING OUILTS.	25



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Caring for Your EZ3[™] Fabri-Fast Quilting Frame

Your EZ3TM Fabri-Fast Quilting Frame is a sturdy frame that can be used finished or unfinished. For extra protection, or to give it a finished look, you may seal, stain and/or finish the frame using a number of different applications. This is best done BEFORE YOU ASSEMBLE your frame.

To seal the wood, we recommend an application of tung oil that will help preserve the wood and will help to prevent warping. To add a certain color to your frame, you may use a Danish Oil finish. We recommend the DeftTM or WatcoTM brands. Some prefer to use a urethane coat to add a more glossy furniture like finish.

Test stain on an inconspicuous place. Many different finishes and/or stains may be suitable for sealing and beautifying your frame. You may want to consult your local paint retailer for finishes that are easy to apply and dry hard–not oily.

Use and Storage Tips

--Store frame in a dry place. If not assembled, store with braces in vertical position. (This will prevent floor moisture from seeping into the Braces). --Do not carry the assembled frame by the quilting rails. Hold the braces instead.

-- Do not drop the frame or let it twist out of square.

Five-Year Limited Warranty

GraceWood, Inc. will replace or repair, at our choosing, any part of the Grace *EZ3TM Fabri-Fast* Quilting Frame, which may be shown to be defective. This warranty does not cover parts damaged through misuse, improper storage, improper assembly, loss, natural events and willful or accidental destruction. Defective parts may be returned only with a valid RMA# which may be obtained by calling: GraceWood, Inc. at **1-800-264-0644**.

Warranty card must be filled out, stamped and mailed to the address on the card <u>within 30 days of purchase</u>.

Contact Information

For Technical Support or any other correspondence concerning your EZ3TM Fabri-Fast Quilting Frame, call 1-800-264-0644 ~ OR ~ E-mail: robin@graceframe.com ~ OR ~ Fax: (801) 908-8888 ~ OR ~ Write to: The Grace Company P.O. Box 27823 Salt Lake City, UT 84127

For details on accessories and other information, see us online at <u>www.graceframe.com</u>

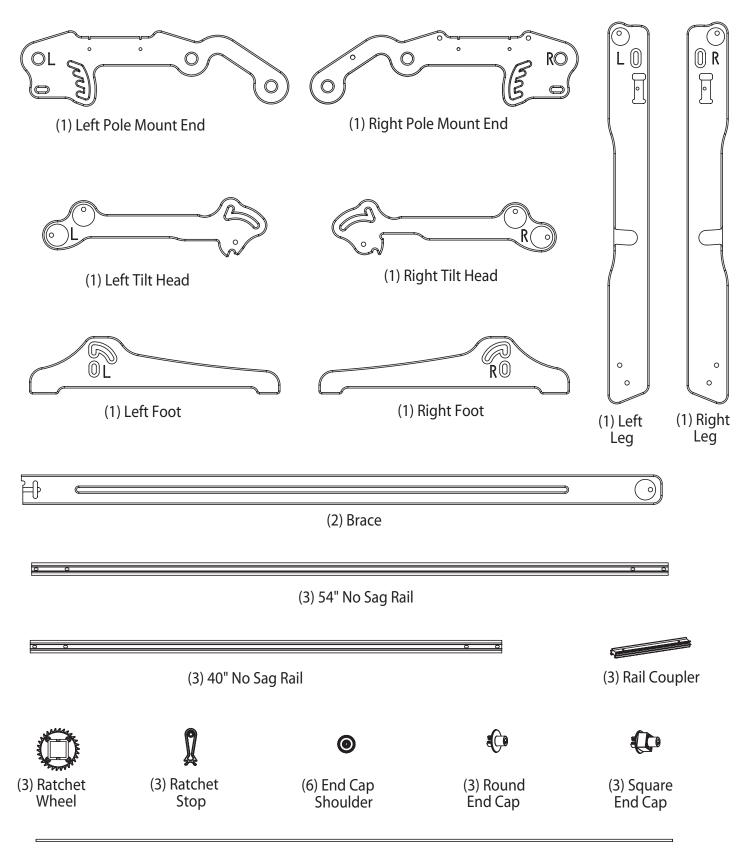
For shipping of materials to The Grace Company address package (postage prepaid) to: **The Grace Company, 2225 South 3200 West, SLC, UT 84119.** Materials may be returned only with a valid RMA# or Returned Merchandise Authorization Number which may be obtained by calling GraceWood, Inc. at **1-800-264-0644.**

If you call after business hours (M-F 8:00 a.m. -5 p.m., MST) be assured that your call will be returned the next business day if you leave a message. Please report any errors in these instructions or make constructive comments to the following: jaren@graceframe.com

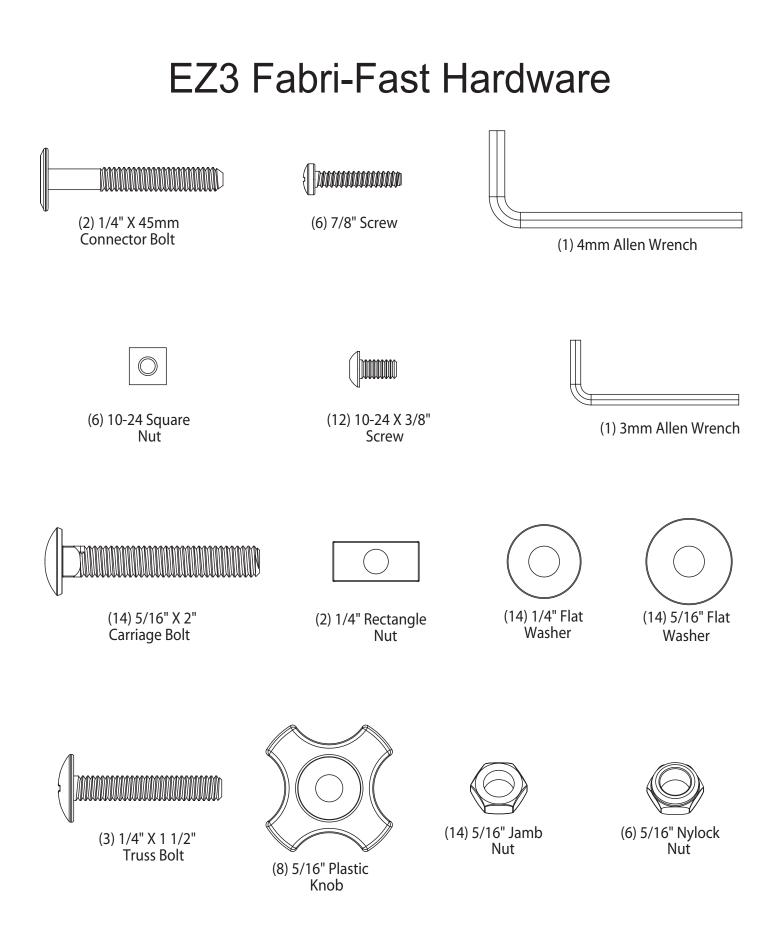
Grace Quilting Frames and Hoops: Innovation and Evolution

Grace Quilting Systems have been developed over the past two decades with several original design innovations. Additionally, because feedback from many of the thousands of quilters who have purchased and use the GraceFrameTM, we have been able to make a frame that will truly enhance the entire process of hand quilting from beginning to end. If you have any suggestions that will help us to improve our product or service, let us know, using one of the above contact methods.

EZ3 Fabri-Fast Parts List



(3) 90" Fabrifast Tubing



Quilting With the Grace EZ3TM Fabri-Fast Quilting Frame

Before You Begin

Using the parts list as a reference, take the parts out of the box and make sure that you have them all. (If there is something missing or broken, contact The Grace Company at 1-800-264-0644. We will promptly ship any needed item.)

Tools Needed

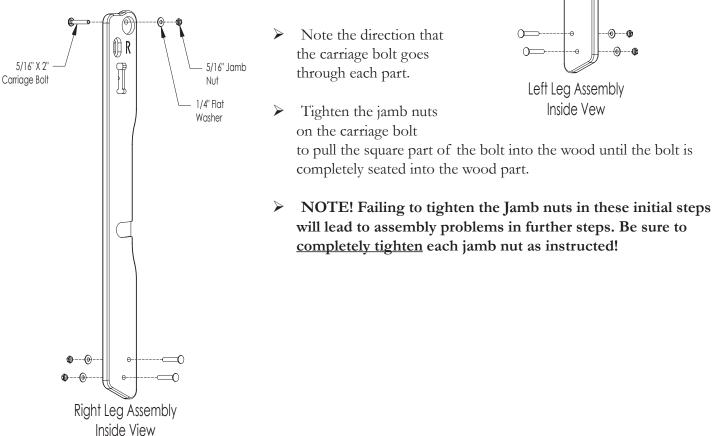
- To assemble the frame you will need a few common tools. Once the frame is assembled, no tools will be needed for the use of the frame.
 - 1. One 1/2" wrench
 - 2. One 7/16" wrench (A combination or socket wrench will also work.)
 - 3. Phillips Head Screw Driver
 - 4. Allen Wrench (provided with hardware)

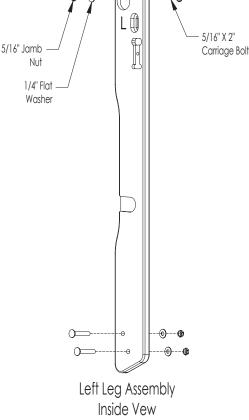
Note: To help you distinguish wood parts, all Left and Right Side parts are marked with an "L" and "R" respectively, engraved into the wood on the <u>inside</u> of the part.

Step 1: Hardware to Leg Assembly

Parts Needed: Right and Left Diagonal Stands

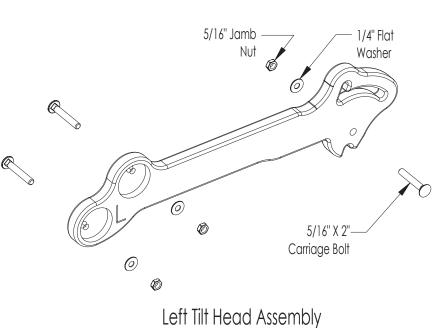
- 6 5/16" x 2" Carriage Bolts
 - 6 Jamb Nuts
 - 6 1/4" Smaller Flat Washers



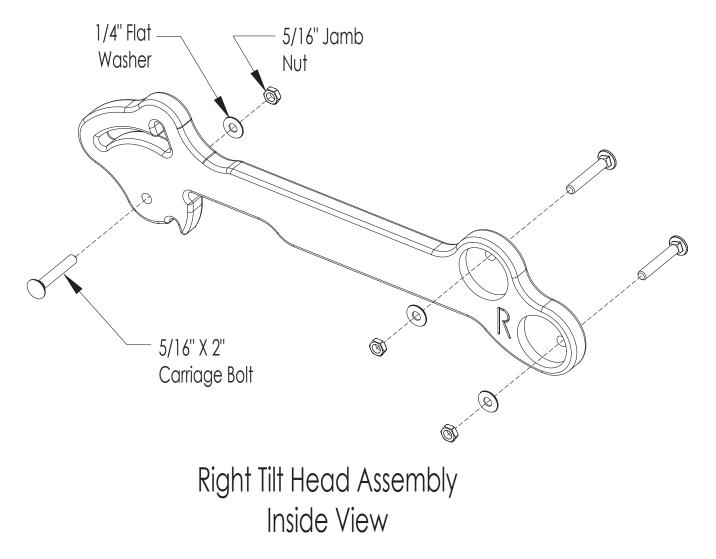


Step 2: Hardware to Tilt Head

- Parts Needed: Right and Left Tilt Heads 6 - 5/16" x 2" Carriage Bolts 6 - 5/16" Jamb Nuts 6- 1/4" Flat Washers
 - Note the direction of the carriage bolts in relation to the Tilt Heads.
 - Position the carriage bolts through both Tilt Heads as shown in drawings. Tighten the jamb nuts over the end of carriage bolts until the square part of the carriage bolt is completely seated into the wood.



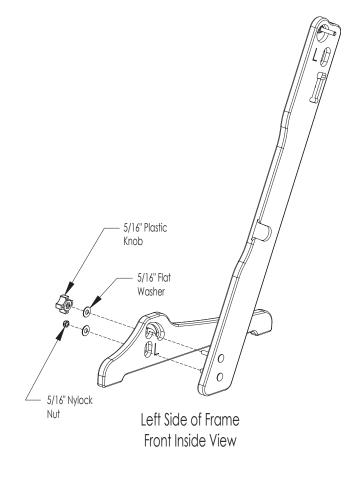


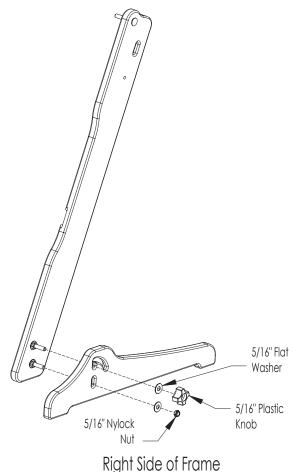


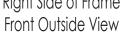
Step 3: Feet to Leg Assembly

Parts Needed: Right and Left Feet 1 – Right Leg (w/ Hardware Installed) 1 – Left Leg (w/ Hardware Installed) 2 -- 5/16" Plastic Knobs 2 – 5/16" Nylock Nuts 4 -- 5/16"Large Flat Washers

- As shown in drawing, position carriage bolt ends through the holes in each foot.
- For ease of tightening, thread flat washers and Nylock nuts onto the bottom carriage bolts first.
- **The nylon side of nylon lock nuts faces out when threading onto the Bolt end. **
- **NOTE! Leave all nylon lock nuts loose enough to slide the joint. **
- Next, thread the washers and plastic knobs on the top carriage bolts.





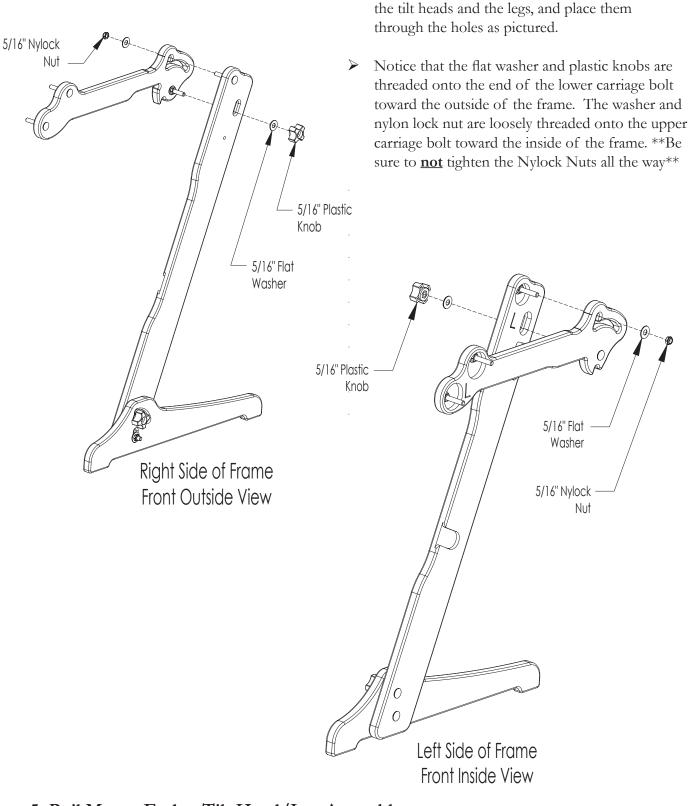


REMINDER! The Nylock Nuts look just like Jamb nuts except for the thin white nylon ring inside. This keeps the nut from eventually working itself off of the bolt. When tightening Nylock Nuts at moveable points like this one, it is important not to over tighten! Tighten the Nylock Nut just enough to hold the washer against the wood, but loose enough to allow the washer to turn with your finger.

Step 4: Tilt Head to Legs Assembly

Parts Needed: Right and Left Pivot Sections (w Hardware Installed)

- 2 5/16" Plastic Knobs
- 2-5/16" Nylock Nuts
- 4 5/16" Large Flat Washers



>

Align the carriage bolts that are already installed on

Step 5: Rail Mount End to Tilt Head/Leg Assembly

Parts Needed: Right and Left Rail Mount Ends

4 – 5/16" Flat Washers 2 – 5/16" Black Plastic Knobs 2 – 5/16" Nylock Nuts

- Fasten the Left Rail Mount End to the Tilt Head/Leg Assembly by placing the two carriage bolts through the Rail Mount End (as shown in picture) on each side. Then place the flat washer over the end and threat on the plastic knob and the Nylock Nut. Do this one side at a time.
- NOTE! Do not over-tighten Lock Nuts! The washer must be able to spin freely.

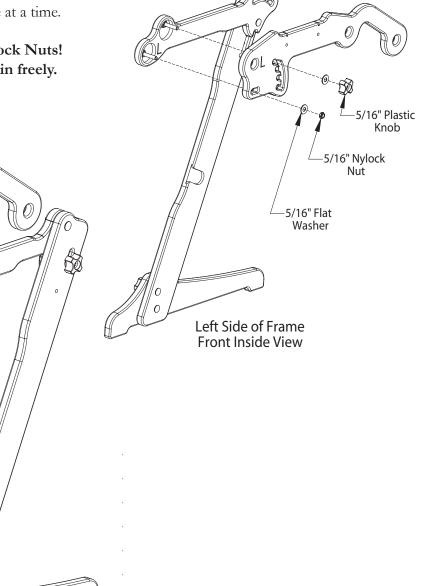
5/16" Plastic

Knob

5/16" Flat

Washer

5/16" Nylock Nut



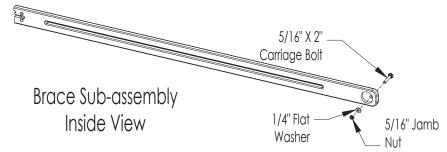
Right Side of Frame Front Outside View

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Step 6: Hardware to Brace Assembly

Parts Needed:

- 2 Braces
- 2 5/16" x 2" Carriage Bolts
- $2 \frac{1}{4}$ " Flat Washers
- 2 5/16" Jamb Nuts



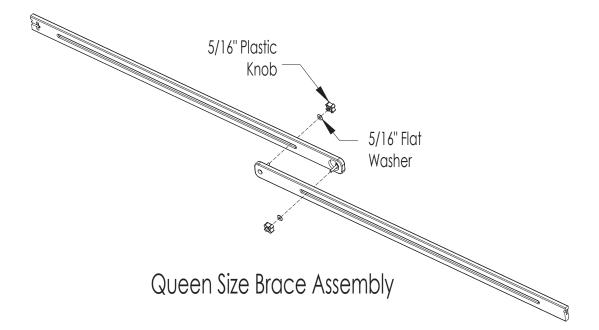
- > Thread one 5/16"x 2" Carriage bolt through the end of each brace section as pictured.
- Place the ¼" Washers and 5/16" Jamb Nuts onto each Carriage Bolt as pictured. Tighten the jamb nut all the way so that the square part on the carriage bolt is drawn completely into the wood.

Step 7: Brace Assembly

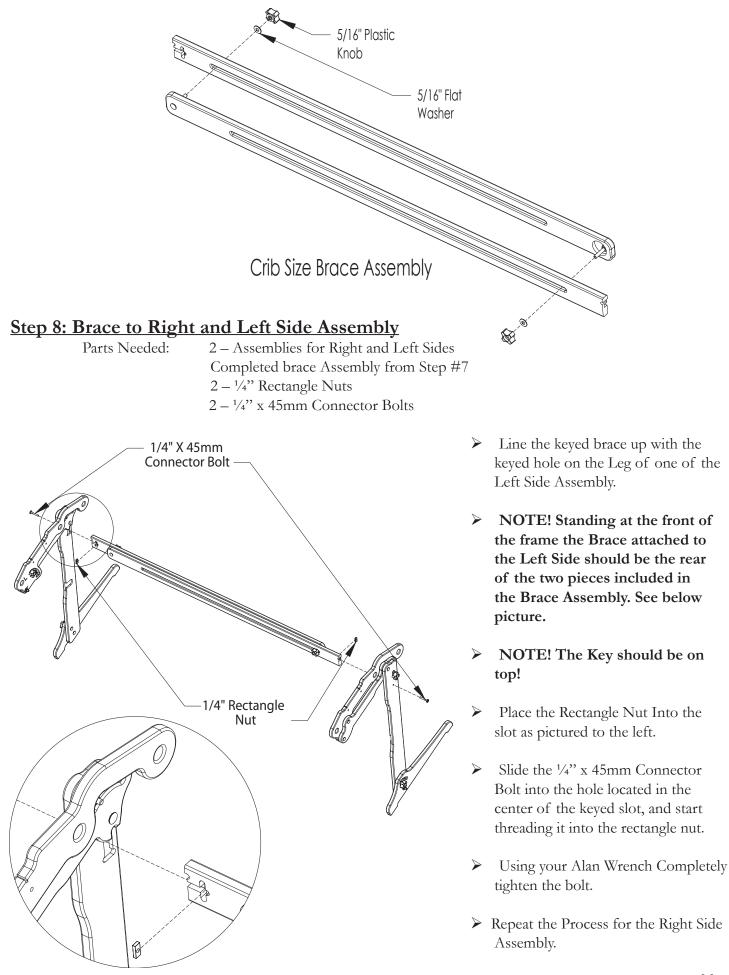
Parts Needed:

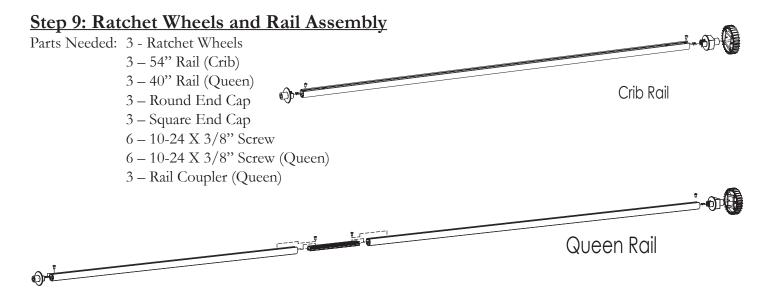
2 – Braces with previously installed hardware 2-5/16" Flat Washers 2-5/16" Plastic Knobs

- Align the Braces as shown in the picture so that the protruding carriage bolt goes through the long slots in the braces.
- NOTE! Make sure that the keyed part of the brace ends are either both on the top side or both on the bottom side.
- Place the 5/16" Flat Washers over the bolt and thread on the black plastic knobs for each side of the brace, as pictured.

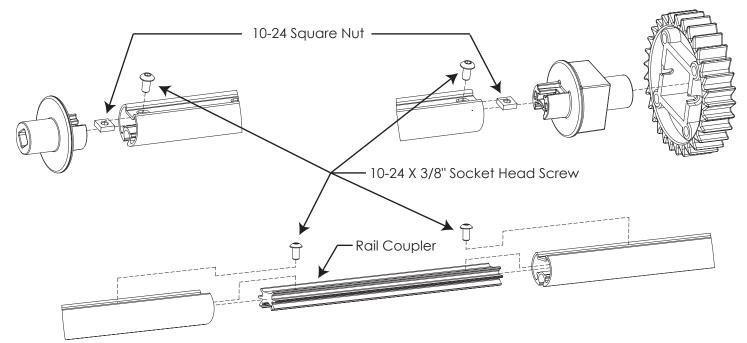


NOTE! No additional pieces are needed to extend the brace from the Crib Size to the Queen Size. You can Lengthen or Shorten the brace by loosening the Black plastic knob and sliding the Braces to the desired position.

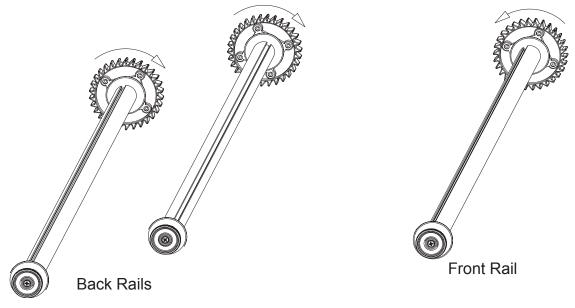




- Assemble your aluminum rails according to the size you have chosen to setup your frame.
- For the queen size assembly, connect the 54" and 40" rails using the rail couplers. Position both ends of the coupler inside the end of each rail as illustrated. Insert a 10-24 x 3/8 socket head screw in the <u>second</u> <u>hole from the end</u> of the rail, lining it up with the hole in the coupler. Do this on both ends of the coupler. If done correctly, the 54" and 40" rails should be fastened together with no gap in between, completely covering the coupler. Tighten the screws completely, using the allen wrench.
- Now, attach the round and square end caps to the ends of your rails using the socket head screws and square nuts. First, push a 10-24 square nut into the slot just below the opening of the square and round end cap (see illustration right). Note: You may need to press the nut against a hard surface or tap it in to make sure it seats all the way in.
- Next, place a socket head screw through the *end hole* in the rail and thread it into the square nut installed in the end cap. Tighten the screws completely, using the allen wrench.

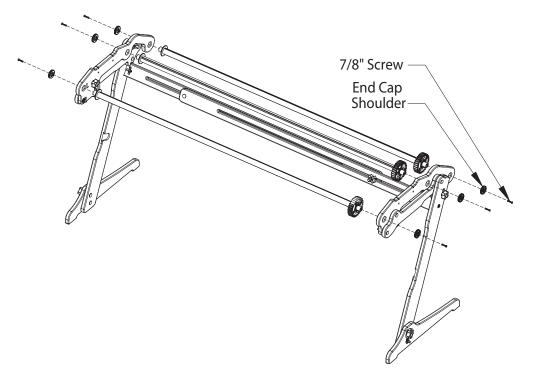


Finally, place the ratchet wheels on the square end caps of each rail, noting the direction of the teeth as seen below. IMPORTANT! The teeth on the front rail wheel need to face toward the back of the frame. The teeth on the other two rails will face toward the front of the frame.



Step 10: Rail to Frame Assembly

- Parts Needed: 3 Previously Assembled Rails
 - 6 End Cap Shoulders
 - 6 7/8" Screws
 - Position the Rail Ends (on ratchet wheel end) through the three holes in the Right Rail Mount End, as shown in drawing.
 - > Place the End Cap Shoulder on the Opposite side of the Rail Mount End. As pictured below.
 - Thread the 7/8" Screw through the End Cap Shoulder into the Rail. Repeat this process on the Left Rail Mount End.

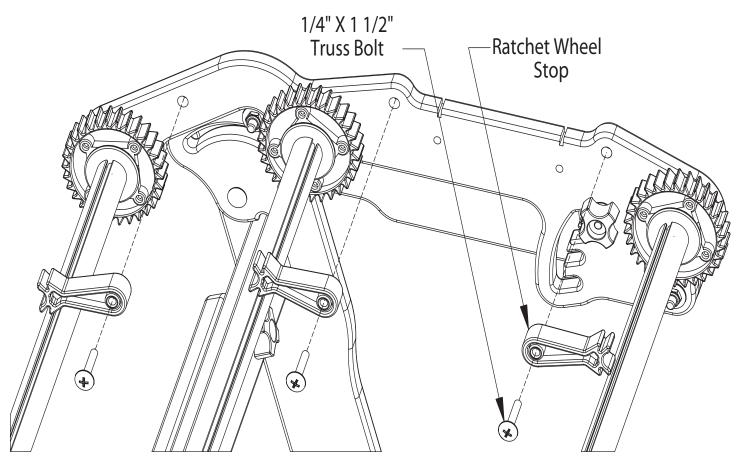


Step 11: Ratchet Stop Assembly

Parts Needed: 3 - Ratchet Stops $3 - \frac{1}{4}$ " x 1 $\frac{1}{2}$ " Truss Bolts

> Thread the Truss Bolt through the Ratchet Stops into the holes on the Rail Mount End as pictured below.

NOTE! FINGER TIGHTEN ONLY!!!!!

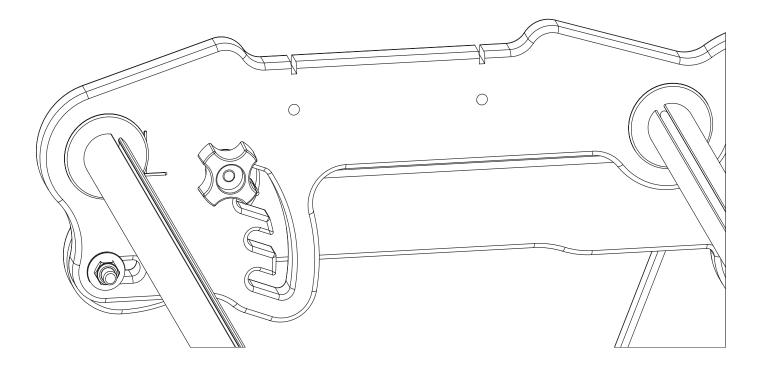


You Are Now Finished with The Assembly Of Your EZ3 Fabri-Fast Quilting Frame!!!

Tilting the EZ3 Fabri-Fast

The Following is done best one side at a time.

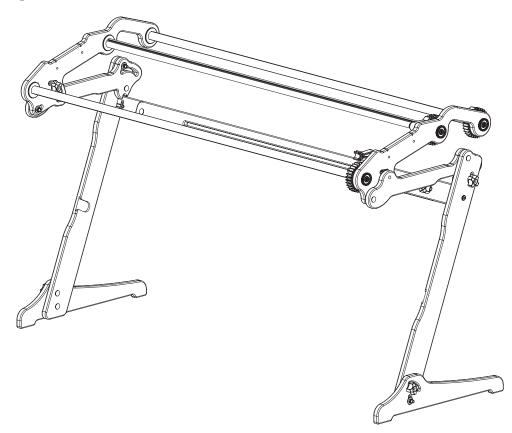
Step 1: Loosen Knob inside front on both ends of the Frame. (As seen in picture below) Step 2: Standing at back of Frame Slide Rail Assembly forward slightly.



Step 3: Tilt to desired Angle of 0-45° degrees.

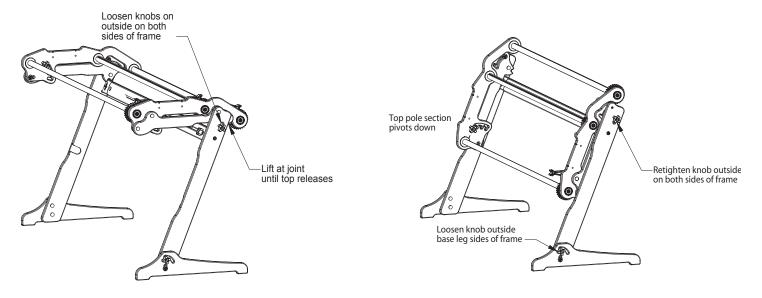
Step 4: Rail Assembly back until both ends rest solid between Teeth in Tilt Arch.

Step 5: Retighten Knobs inside Front on Both Ends of Frame.



Folding the EZ3 Fabri-Fast

- Frame must not be tilted when it is to be folded. (See left picture below.)
- Folding feature will not affect the quilt in progress.
- Some practice may be required to fold the quilting frame in 20 seconds.
- Folded frame is about 6-1/2" wide.
- ➢ Follow the Steps in order, without variation.
- Reverse steps to unfold.



Step 1: Loosen knobs outside on both sides of frame. (As seen in left picture above)

Step 2: Lift at joint until top releases. (As seen in left picture above in diagram A)

Step 3: Top Rail Section pivots down. (As seen in right picture above in diagram B)

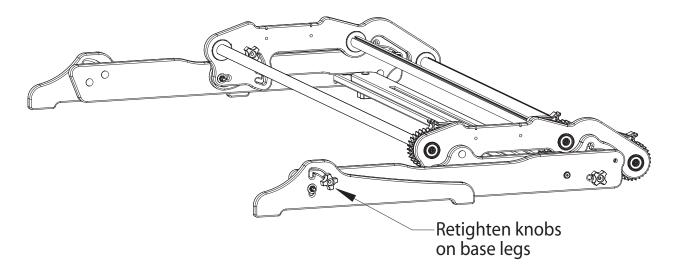
- Step 4: Retighten Knobs outside on both ends of Frame. (As seen in right picture above in diagram B)
- Step 5: Loosen knobs outside Base Legs on both sides of Frame. (As seen in right picture above in diagram B)

Step 6: Lift Entire Frame from the Brace until legs drop to the joint. (As seen in picture below in diagram C)

Step 7: Frame will rotate forward and down. (As seen in picture below in diagram C)

Step 8: Gently lay Frame Flat. (As seen in picture below in diagram C)

Step 9: Retighten Knobs on Base Legs. (As seen in picture below in diagram C)



Quilting on the EZ3-FFTM

Preparing The Fabric Layers For Installation

- Make sure that each layer of fabric is the correct size and has straight edges and square corners. The short time and small effort that you spend measuring and squaring will result in much time saved later in the quilting process.
- If the lining or backing has a seam running down the middle, then be sure to cut the salvage edge off at the seam and press the seam open over the entire length.
- > Bonded batting is strongly recommended.
- PLEASE READ THE FOLLOWING INSTALLATION METHODS COMPLETELY BEFORE CHOOSING YOUR METHOD AND PROCEEDING!

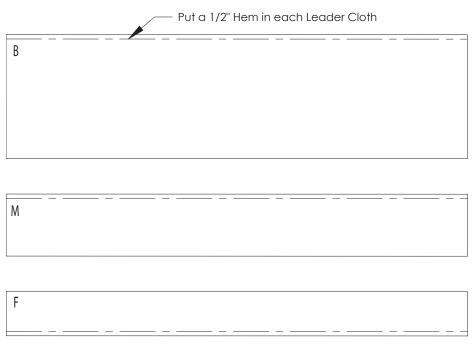
Installing the Quilt Fabric Layers METHOD #1: MAKING AND USING CLOTH LEADERS

	Attach to Back Rail	В		
				14"
			Cut Along Line	
26"	Attach to Middle Rail			
			Cut Along Line	7
	Attach to Front Rail	— — — — — F		

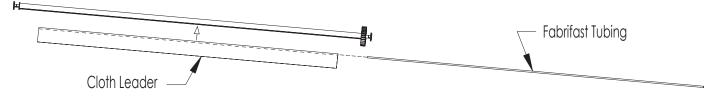
This is the preferred method for installing your fabric, and is especially recommended when quilting a pieced top or a backing made with

multiple pieces. Though it will take a little more time in the beginning, in the long run it will be a time-saver, preventing you from having detach and re-attach your quilt as you near completion.

- MATERIAL: We recommend using unbleached muslin or mattress ticking.
- Cut your material to the dimensions specified above. Pieces "B", "M", and "F" correspond to the Back Middle and Front rails.



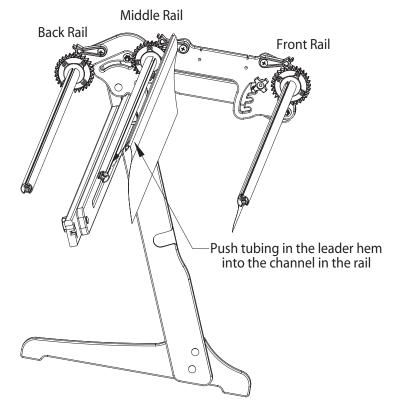
Slide the plastic retention tubing into this hem or casing (pictured below).



- ALTERNATIVE: Instead of making a hem or casing, you may also draw or sew a straight line in your fabric, ¹/₂" from the edge of the leader cloth. Use this line as a guide to line up your fabric retaining tube.
- Now push your tubing with fabric into the slot of the corresponding rail. Insert the 14" leader into the back rail, the 7" leader to the middle, and the 5" to the front.
- Now you are ready to install your fabric layers to the quilting frame, attaching each layer to the corresponding cloth leader.

1. Backing Fabric

➤ A. Proper Sizing: The first fabric that will be applied to the quilting frame is the Backing. The Backing is also known as the lining fabric. This piece of fabric will be the under side of the finished quilt. It is recommended that this piece of fabric be larger than the top, on all four sides, especially if your top is a pieced top. (A pieced top may stretch out and become larger than the backing if you do not make this allowance). The Backing fabric can be one continuous piece of fabric together.



- B. Piecing the Backing fabric: Many quilts have back fabrics that are not one continuous piece of fabric and are pieced together using two fabric pieces with a seam down the middle or three fabric pieces with two seams having been sewn. Cut the selvedge off before you piece the back fabric together. The selvedge is woven more tightly than the rest of the fabric and won't have the same give as the rest of the fabric. This may cause the seam to be too tight. Use a slightly larger, looser machine stitch than normal in sewing/piecing the lengths of the back fabric together. You also can sew your back fabrics together using crosswise piecing.
- **C. Backing fabric to Middle Rail:** Mark the center of Backing Fabric with a pin or pencil mark.
- Place the center mark to the center of the Middle Rail. (The Backing Fabric is put on with the wrong side of the fabric up and visible.)

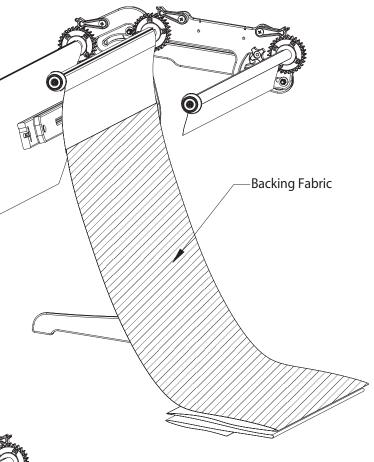
Lay the Fabric naturally and evenly along the straight line of the cloth leader. Do not stretch the Fabric from side to side. Start pinning the fabric onto the leader along the line that has been stitched or marked. Note: flat flower pins work great for this, and roll well against the rail

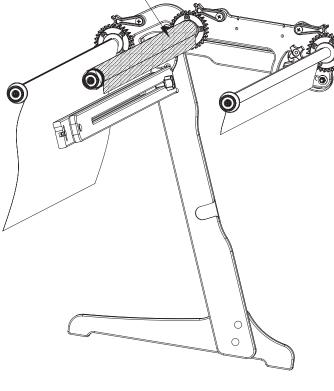
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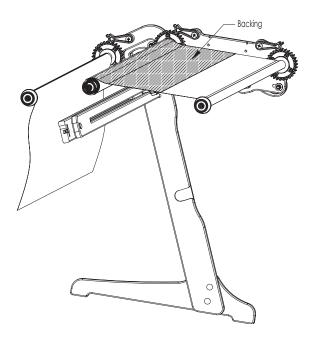
- D. Rolling Fabric onto Middle Rail: Next, roll the quilt backing onto the Middle Rail. To do this properly, be sure to roll the rail counter-clockwise as you look at the frame from the view below (toward the ratchet wheels). The fabric needs to roll from off the top of the rail and toward the front rail (see below).
- Roll the material onto the Middle Rail, making a smooth roll. Be sure that no wrinkles are present.

Backing

Smooth the Quilt from the center to the outside edges of the Rail as it is being rolled. At this point do not roll the Fabric tightly, just nicely smooth and even.



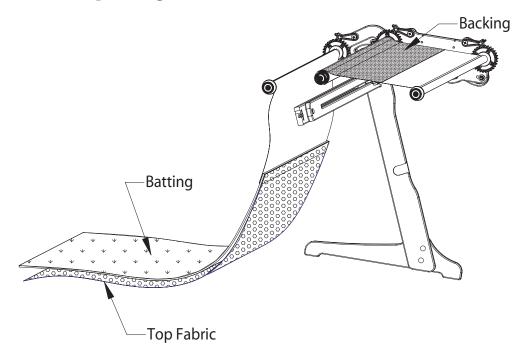




- E. Opposite end of Backing Fabric to Front Rail: Place the other end of the Backing Fabric to the Front Quilting Rail cloth leader, centering with the mark as directed on the Front Rail (the same way as the first rail).
- Place the center mark to the center of the Front Rail leader. Lay the Fabric naturally and evenly along the straight line of the leader cloth. Do not stretch the Fabric. Pin the fabric to the leader cloth.
- Make sure that the amount of rail showing at the edges of the Fabric to the End Boards is the same on all Rails.
- *Note* Fabrics should never be tight. For best results, use as little tension as possible without letting the Quilt sag.

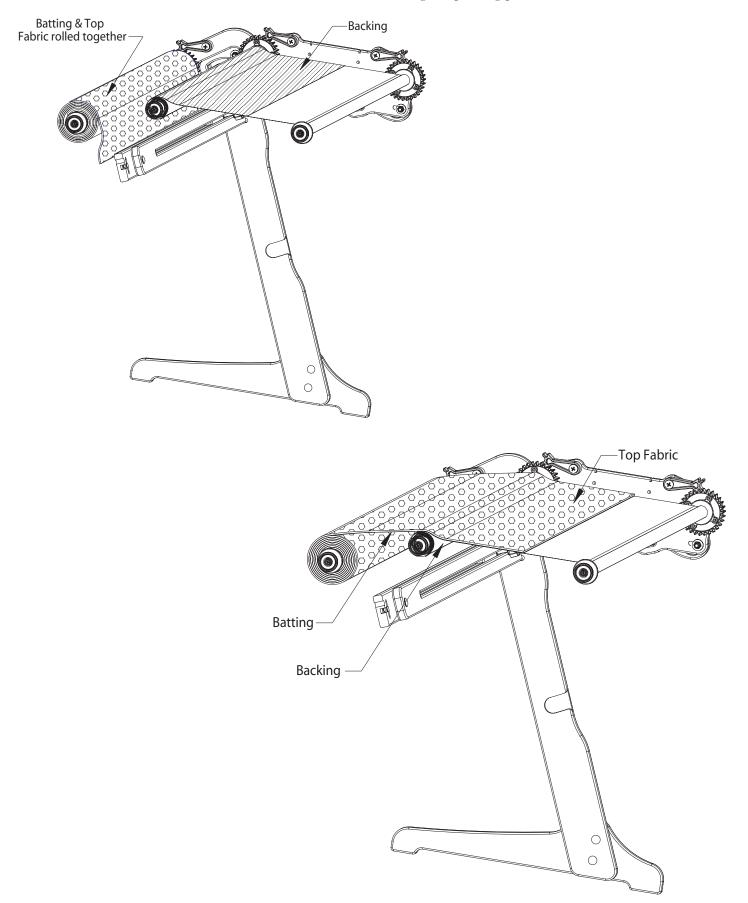
2. Batting and Quilt Top

- > Lay the Quilt Top face down on the floor and line your batting directly over it. Mark the center of the Top.
- > Line up the edge of the Quilt Top/Batting to Back Rail cloth leader as pictured.
- > Line the center the Top/Batting to the center of the rear rail. Pin fabric to the cloth leader.



- Roll the Top/Batting onto the rear rail by rolling the rail counter-clockwise, as you did the middle rail. Make sure it rolls smoothly, with no wrinkles.
- When you reach the end of the fabric, pull the loose end of the Top/Batting over the backing and line it up on the front rail.
- > Completely pin the Batting and Quilt Top moving from the center out to each corner.

Remember to smoothly and evenly lay the Quilt Top to the Front Rail *without stretching* from corner to corner during the pinning process.



METHOD #2: INSTALLING FABRIC DIRECTLY TO THE RAILS

- > This Method works well if your quilt top is a single piece and your backing is also one piece.
- In this method you bypass using cloth leaders and simply make a ³/₄" hem or casing at either each of your backing (or draw or sew a straight line about ¹/₂" from each edge).
- Next, insert the fabric retaining tube into the hem or casing, or, if using the line method, push the fabric into the slot of the rail, following the straight line the entire way.
- > Push the tubing with fabric securely into the rail the entire length.
- > Do this in the same order as outlined in Method #1:
 - 1. Backing to Middle Rail
 - 2. Backing to Front Rail
 - 3. Top and Batting to Back Rail
 - 4. Top and Batting to Front Rail
- NOTE: The batting should not be inserted into the rail slots. Instead it should lie right up next to the slot. It may be pinned to secure it in place, if desired.

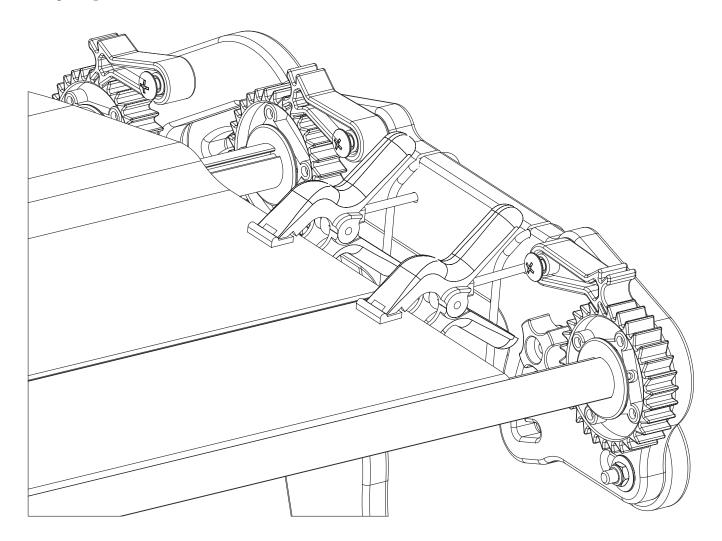
(See Side Tension Fabric, Next Page)

Assembly & Use of Accessories

(Available from the Grace Company: 1-800-264-0644)

Application and Use of Bungee Clamps

- The Bungee Clamps help keep even tension on the outside edges of your quilt work area. First put the Bungee Clamp inside the Left end of the frame. Thread the cord through the hole on the inside of the Left Pole Mount End. Pull the Bungee Cord down into the slot.
- You will then want to attach the clamp to your fabric. NOTE: Very little tension is recommended while quilting.



TROUBLE SHOOTING

<u>Problem:</u> Puckering is occurring throughout the quilt top as soon as it's removed from the frame.

<u>Solution</u>: Uneven tension was applied to the quilt layers (ex: if the top has puckers, the bottom was rolled faster or tighter than the top). This is a common mistake. It is VERY IMPORTANT that you <u>use as little front-to-back tension on your fabric as possible</u>! It is much easier to keep the tension equal on the backing and top if you keep it minimal from beginning to end.

Problem: Fabric sags on one side or in middle.

<u>Solution:</u> Fabric may not be cut evenly straight or the grain of the cloth may not be square. Take it off and square it up or pull (gently) to square.

Problem: Sides of quilt have a concave edge.

<u>Solution:</u> The fabric was stretched along the rail. Take the fabric off and let it relax until it is not misshapen and then re-install, without stretching it along the edge.

<u>Problem:</u> Batting tears or separates during the tightening of the ratchet wheels. <u>Solution:</u> The Batting was stretched and stressed. One thing you can try is to make the Batting should be longer than the Quilt that you are making and there should be no tension applied to it. Another alternative is to use a few extra inches of Batting and let it sag down between the two rear rails. This will stop the Batting from pulling. You may unroll the rear rail and fix the Batting at any time during the quilting process.

Problem: Rails are bowing in.

<u>Solution:</u> The causes may be: 1. Seam down the center of the Fabrics may be sewn too tightly and is not giving with the rest of the Fabric. If the Seam is the problem the Quilt may be attached sideways, 2. Fabric is not cut evenly. 3. Too much tension has been applied. 4. Fabric has been stretched along the Rails instead of naturally laid along the Rails then attached.

Helps for Tied Quilts:

Before installing the Quilt onto the Frame, mark both the Quilt Top and Backing in similar increments along the two side edges. (The sides that are not tacked onto the Rails.) While rolling the Quilt during the tying process watch the marks. This will help you to keep an equal tension on the Top and Backing Fabrics so you won't over tighten one or the other of your Fabrics. Important! When rolling into a new area of tying, allow your last row of ties to remain in the new area of tying. Also, tie your knots tight. DO NOT over roll your last row of ties over the turn in the rail.