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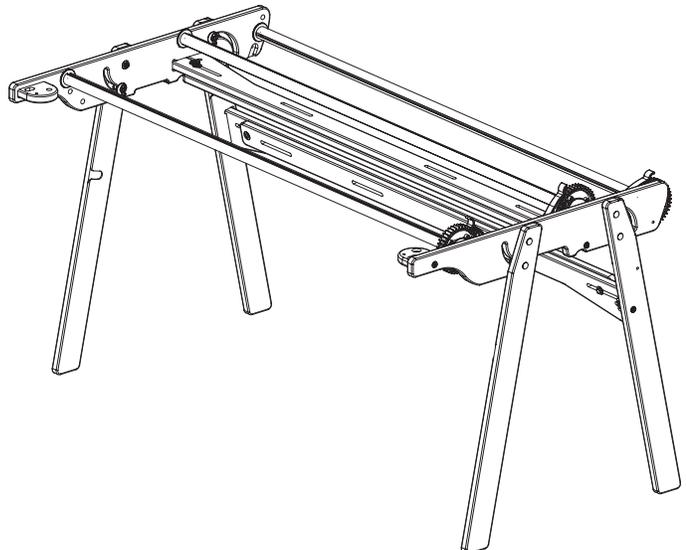
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PATENT PENDING

Caring for Your A34™

Your A34™ 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 Deft™ or Watco™ brands. Some prefer to use a urethane coat to add a more glossy 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 poles and braces in vertical position. (This will prevent floor moisture from seeping into the poles).

--Do not carry the assembled frame by the quilting poles. Hold the braces instead.

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

Lifetime Limited Warranty

GraceWood, Inc. will replace or repair, at our choosing, any part of the Grace A34™ Quilting Frame, which may be shown to be defective. This Lifetime 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 within 30 days of purchase.

Contact Information

For Technical Support or any other correspondence concerning your A34™ Quilting Frame, call 1-800-264-0644 ~

OR ~ E-mail: robin@graceframe.com ~ OR ~ Fax: (801) 485-4388 ~

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 www.graceframe.com

For shipping of materials to the Grace Company address package (postage prepaid) to: The Grace Company, 2275 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 **1-800-264-0664**.

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

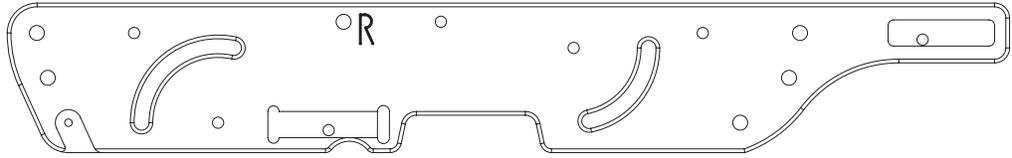
Grace Quilting Frames and Hoops: Innovation and Evolution

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 GraceFrame™, 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, please tell The Grace Company by corresponding to us using one of the above methods.

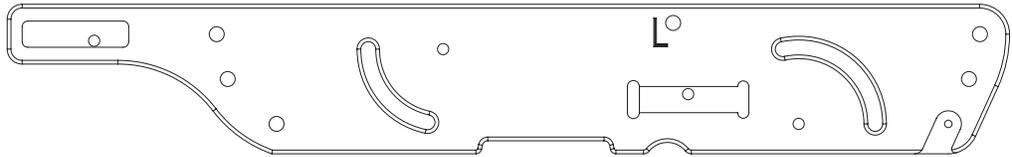
A34 Parts List



(4) Braces



(1) Right Pole mount End



(1) Left Pole Mount End



(1) Right Front Leg



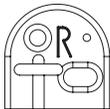
(1) Left Front Leg



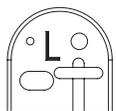
(1) Right Back Leg



(1) Left Back Leg

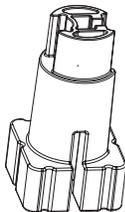


(1) Right Accessory Tray



(1) Left Accessory Tray

Pole Parts



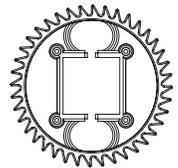
(3) Square End Cap



(3) Round End Cap



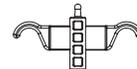
(3) Ratchet Stop



(3) 40 Tooth Ratchet Wheel



(3) Pole Cap (Pre-Installed in ratchet wheel)



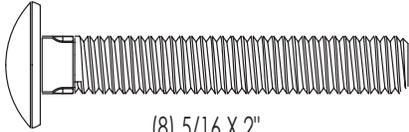
(3) Quick Release Pole Hook



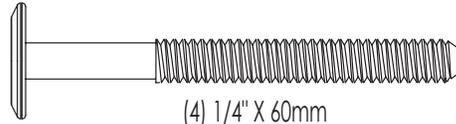
(3) Springs

Hardware Parts List

Drawings display hardware in actual size



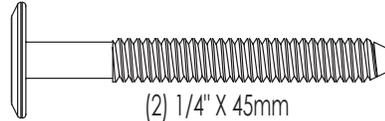
(8) 5/16 X 2"
Carriage Bolt



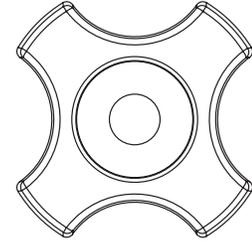
(4) 1/4" X 60mm
Connector Bolt



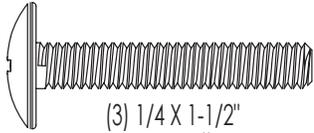
(4) 5/16 X 1-1/2"
Hex Bolt



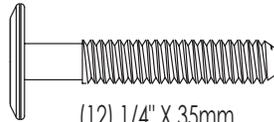
(2) 1/4" X 45mm
Connector Bolt



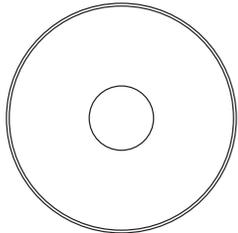
(4) 5/16 Plastic
Knob



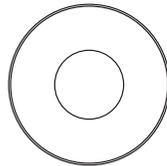
(3) 1/4 X 1-1/2"
Truss Bolt



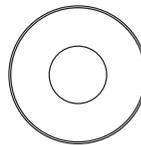
(12) 1/4" X 35mm
Connector Bolt



(4) 1-1/4"
Fender Washer



(8) 5/16" Flat
Washer



(8) 1/4" Flat
Washer



(6) 1/4"
Rectangle Nut



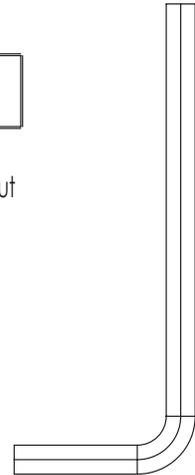
(8) 5/16" Jamb
Nut



(4) 5/16"
Nylock Nut



(8) Plastic
Roller



(1) 4mm Allen
Wrench

Pole List

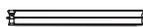
(3) 105" Fabrifast Tubing



(3) 57-11/16" Aluminum Pole



(1) Fabricast
Tool



(6) Aluminum
Rail Coupler



(18) 10-24 Socket
Head Screw



(3) 14" Aluminum Pole



(3) 36" Aluminum Pole

Assembly of the A34™ Quilting Frame

BEFORE YOU BEGIN

Using the preceding parts list as a reference, take the parts out of the box and make sure your package is complete. (If there is something missing or damaged, **do not call the store or dealer from whom you purchased the product.** Please contact The Grace Company directly at 1-800-264-0644).

TOOLS NEEDED

To assemble your frame, you will need the following common tools:

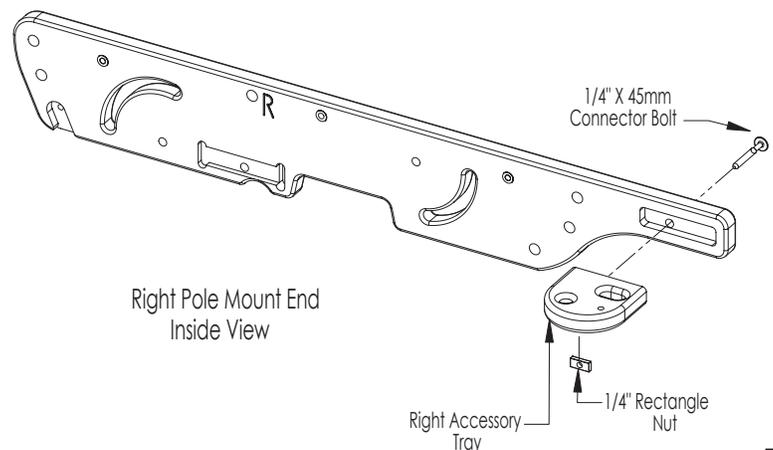
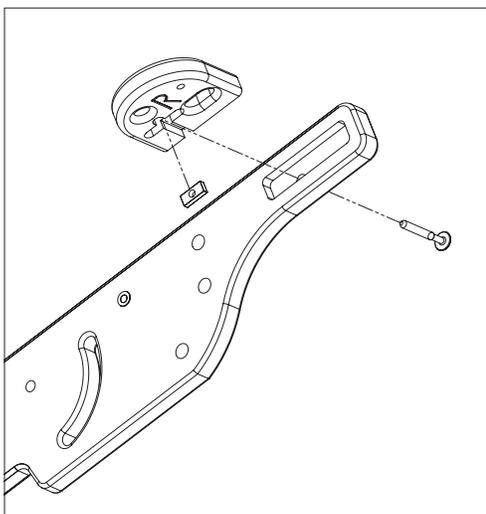
1. One 1/2" wrench
2. Phillips Head Screw Driver
3. Wing Grip Tool (to easily tighten and loosen plastic knobs--provided)
4. Allen Wrench (provided)

- Note: To help you distinguish between wood parts, all Left Side parts are marked with an "L" grooved into the wood on the *inside* of the part. Right side parts are also marked with an "R" on the inside. The first four steps will involve installing hardware into parts and performing other sub-assemblies in preparation for further steps.
- This is a new product! We welcome your feedback on this product or these instructions. If you encounter a problem during assembly or use of the Grace A34™, and you can't seem to overcome it, call us before frustration sets in! ☺ 1-800-264-0644.
- **NOTE!** Read each step all the way through before actually assembling parts in that step.

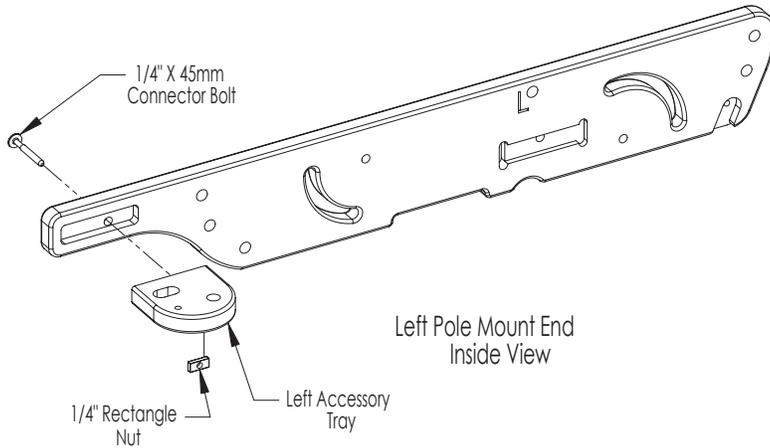
STEP 1: LAMP HOLDER TO POLE MOUNT END ASSEMBLY

PARTS NEEDED: 1 – LEFT POLE MOUNT END
 1 – RIGHT POLE MOUNT END
 2 – RIGHT AND LEFT ACCESSORY TRAY
 2 – 1/4" X 45MM CONNECTOR BOLT
 2 – RECTANGLE NUT

- Attach the Right Accessory Tray to the Right Pole Mount End by placing a 1/4" x 45mm connector bolt through the hole at the front of the Pivot Section, with the head of the bolt on the outside.
- Place a 1/4" rectangle nut in the cross slot of the Left Accessory Tray and thread the bolt through the nut, as illustrated below.



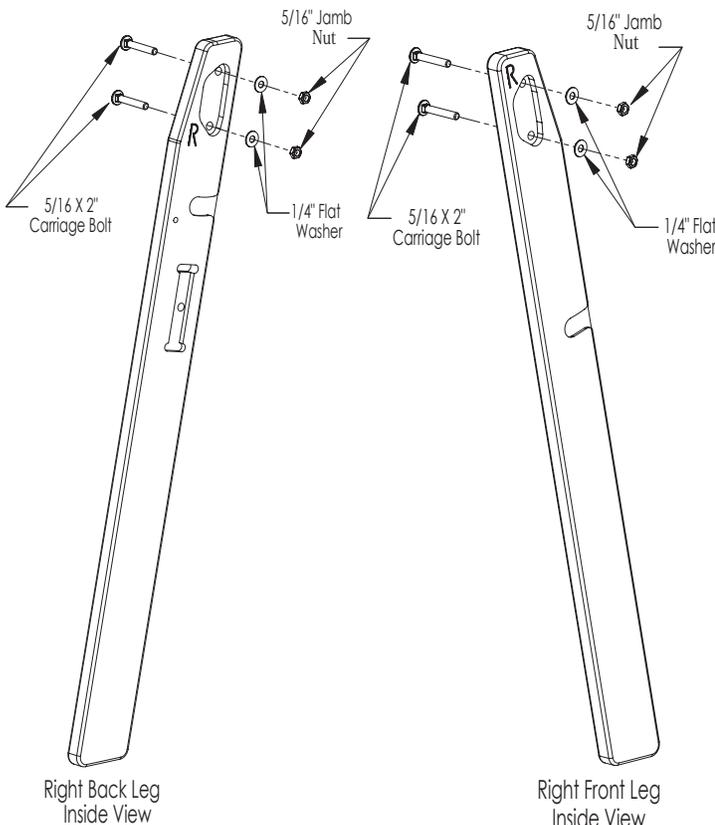
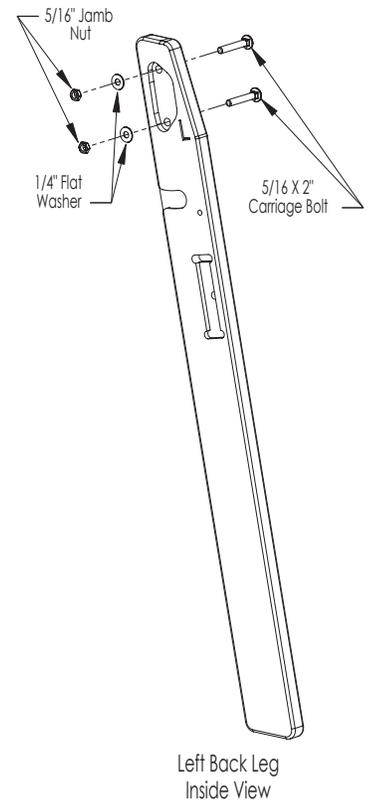
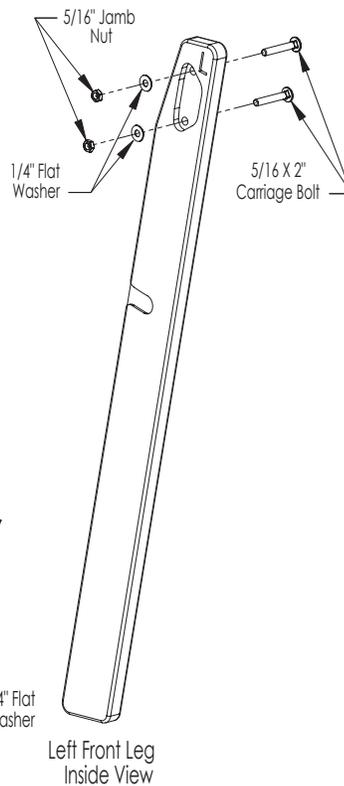
- Tighten the 45mm bolt completely, using the allen wrench provided. Repeat these instructions for the Left Pole Mount End.



STEP 2: HARDWARE TO LEG ASSEMBLY

- PARTS NEEDED: 1 – LEFT AND RIGHT FRONT LEG
 1 – LEFT AND RIGHT BACK LEG
 8 – 5/16" x 2" CARRIAGE BOLT
 8 – 1/4" FLAT WASHER
 8 – 5/16" JAMB NUT

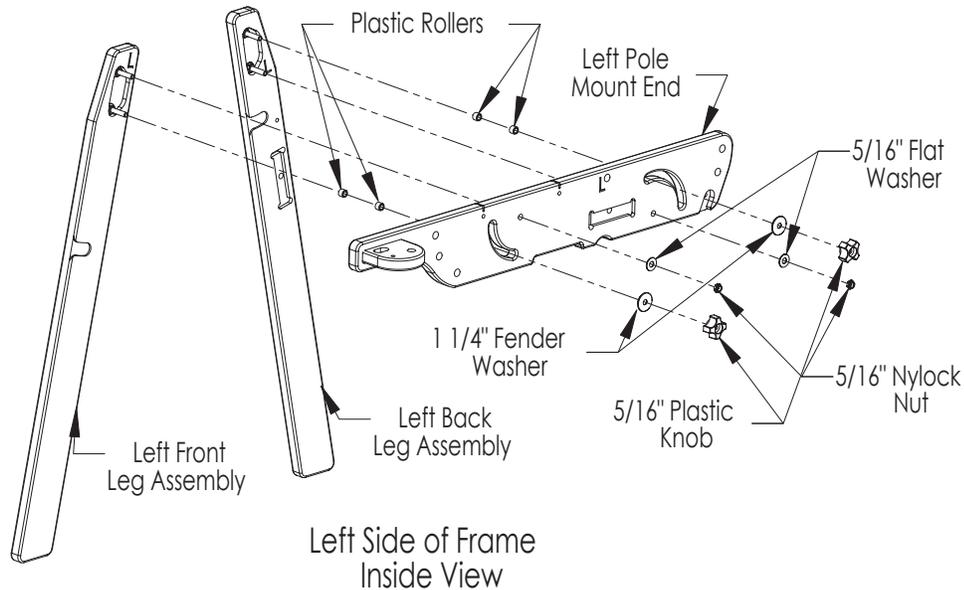
- Put two 5/16" x 2" carriage bolts into the two upper holes of left side legs, as pictured (see right).
- **NOTE!** The head of the bolt should be on the outer side of the leg (opposite the side marked "L").
- Next put a 1/4" flat washer and a 5/16" jamb nut onto each carriage bolt and **completely tighten the jamb nut onto the bolt.**



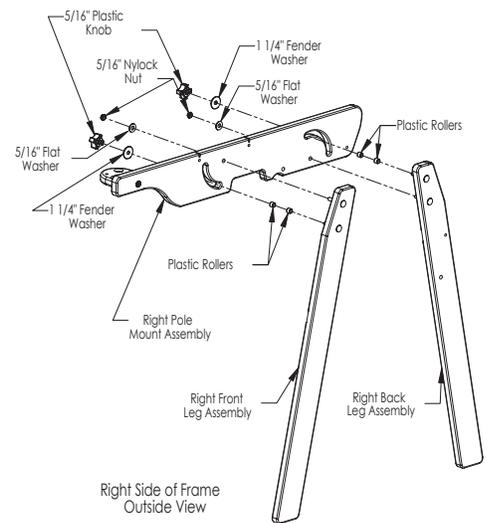
- **NOTE!** Failing to tighten jamb nuts in these initial steps will lead to assembly problems in further steps. Be sure to completely tighten each jamb nut as instructed!
- Repeat these instructions for the right side legs

STEP 3: LEGS TO POLE MOUNT END ASSEMBLY

PARTS NEEDED:	1 – LEFT AND RIGHT FRONT LEG	1 – LEFT AND RIGHT BACK LEG
	1 – LEFT AND RIGHT POLE MOUNT END	4 – 1/4" FENDER WASHER
	4 – 5/16" FLAT WASHER	4 – 5/16" PLASTIC KNOB
	4 – 5/16" NYLOCK NUT	8 – PLASTIC ROLLERS



- First, put two plastic rollers on the lower bolt in the Left Front Leg and two on the upper bolt of the Left Back Leg.
- Next, line up the parts and slide the Left Pole Mount End onto the four carriage bolts as pictured above. The top front bolt goes through the hole near the top of the front slot. The bottom front bolt goes through the front slot itself.
- The top back bolt goes through the back slot, while the bottom back bolt goes through the hole near the bottom of the back slot.



- With the Pole Mount End properly in place, place a 1 1/4" fender washer (largest) and a 5/16" plastic knob onto the two bolts in the slots,
- Next, place a 5/16" flatwasher and a 5/16" nylock nut (nylon side out) onto the other two bolts.
- **NOTE!** The nylon lock nuts look just like jamb nuts, except for the thin nylon ring inside. This keeps the bolt from eventually working itself off of a bolt. When tightening nylock nuts at movable points like this one, it is important not to over-tighten! Tighten this nylock nut just enough to hold the washer against the wood, but loose enough to allow the washer to turn with your finger.

- Repeat these instructions for the right side assembly (see right).

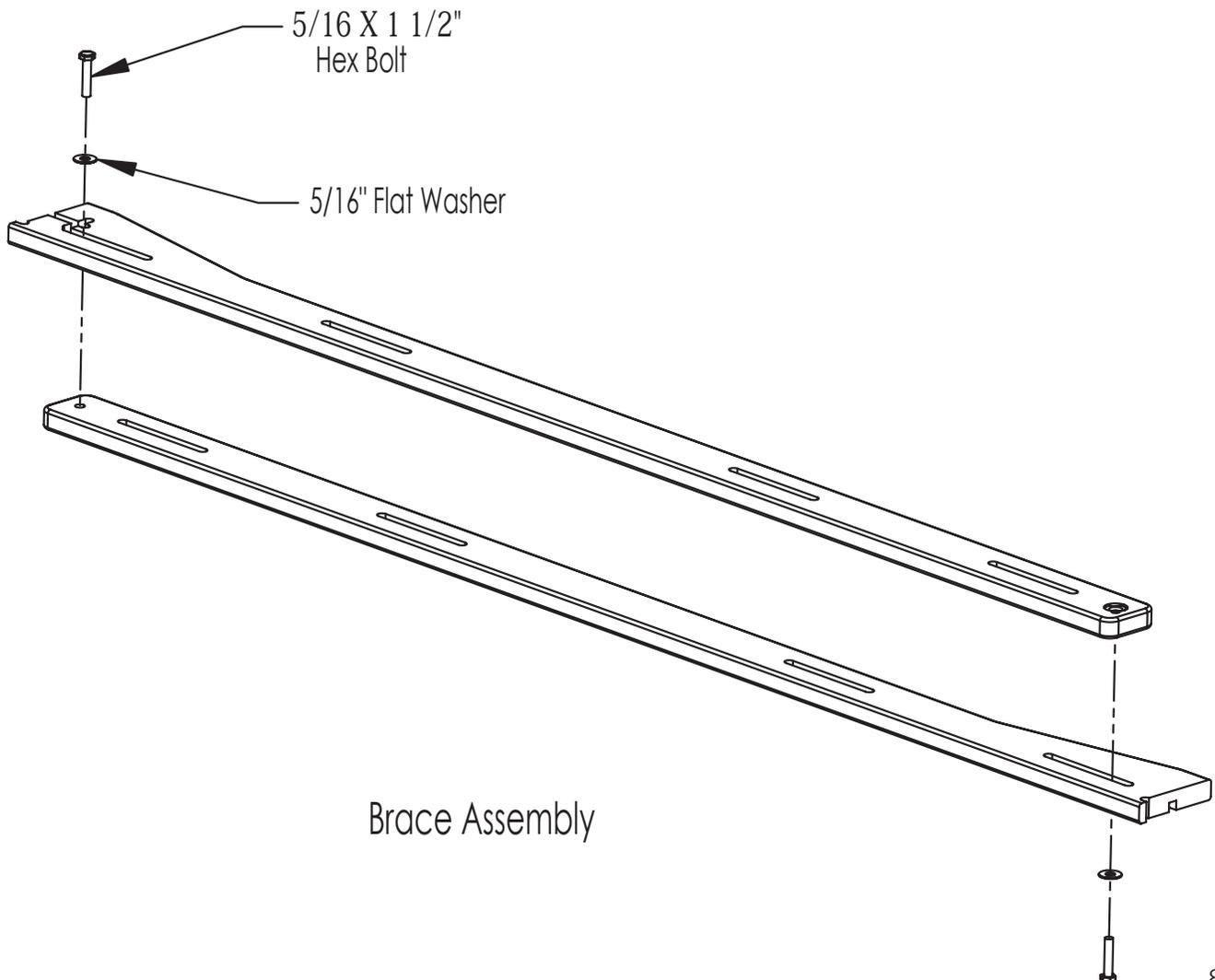
STEP 4: BRACE ASSEMBLY

PARTS NEEDED:

- 4 – BRACES
- 4 – 5/16" x 1 1/2" HEX BOLT
- 4 – 5/16" FLAT WASHER

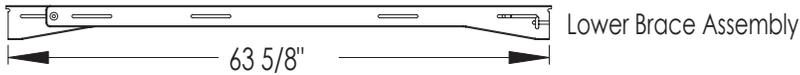
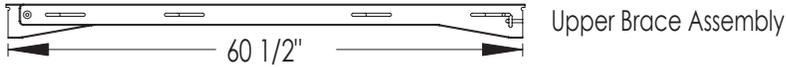
- In this step, you will pair the brace pieces together to form the upper and lower braces.
- Take two braces and line them up with each other as pictured. (Now is the time to select the size of frame you want to initially assemble. See the chart on the following page for guidance. Crib size is pictured on this page).
- **IMPORTANT!** Be sure the inserted metal T-Nut on the end of each brace is facing away from the other brace (toward the outside)!
- Place a 5/16" x 1 1/2" hex bolt **with 5/16" (larger) flat washer** through the selected long slot of the one brace and into the hole and T-nut of the other brace.
- Repeat these instructions for the other set of braces.

LEAVE THE HEX BOLTS LOOSE AT THIS POINT, ALLOWING THE BRACES TO TELESCOPE IN AND OUT.

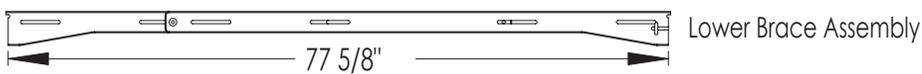
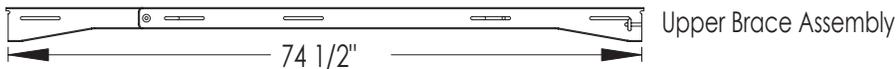


Brace Sizes

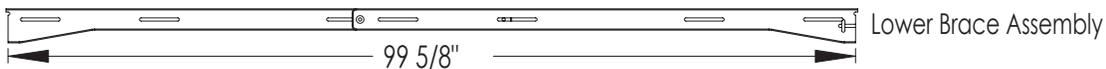
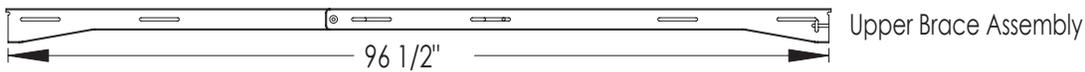
Crib Size (59" quilting space)



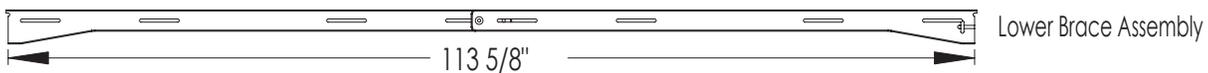
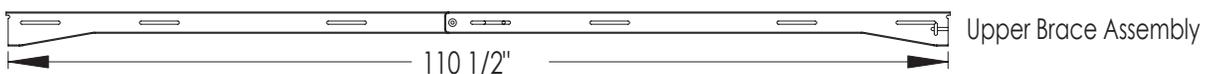
Twin Sizes (73" quilting space)



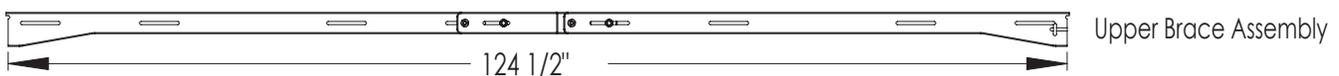
Queen Size (95" quilting space)



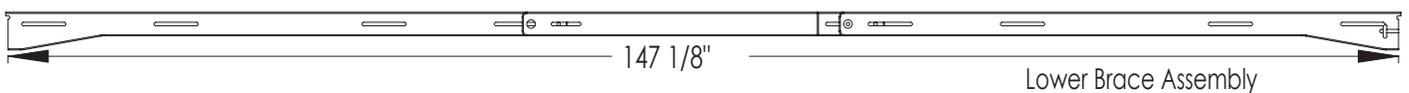
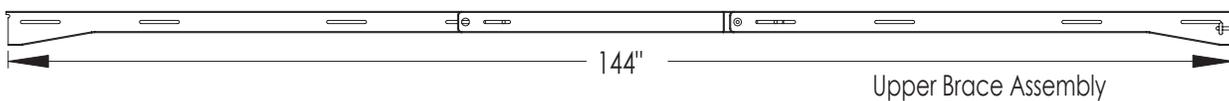
King Size (109" quilting space)



*****Optional Super King Size (123" quilting space)*****

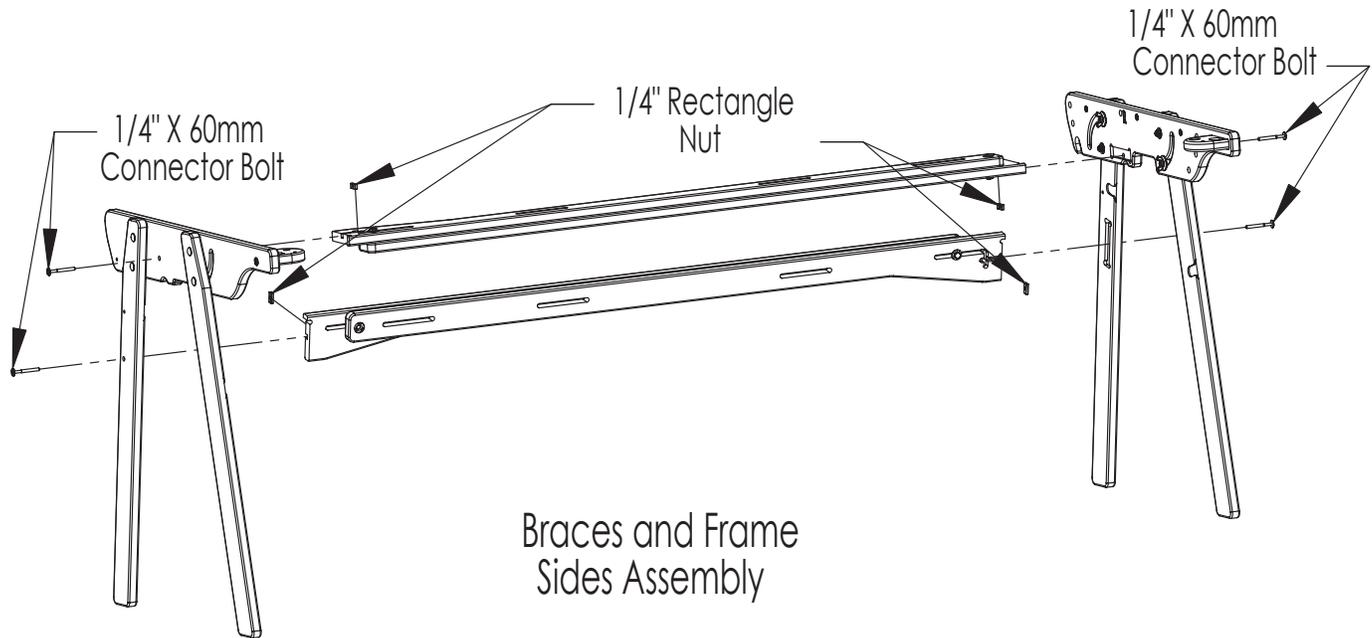


*****Optional Extra Long Super King Size (143" quilting space)*****



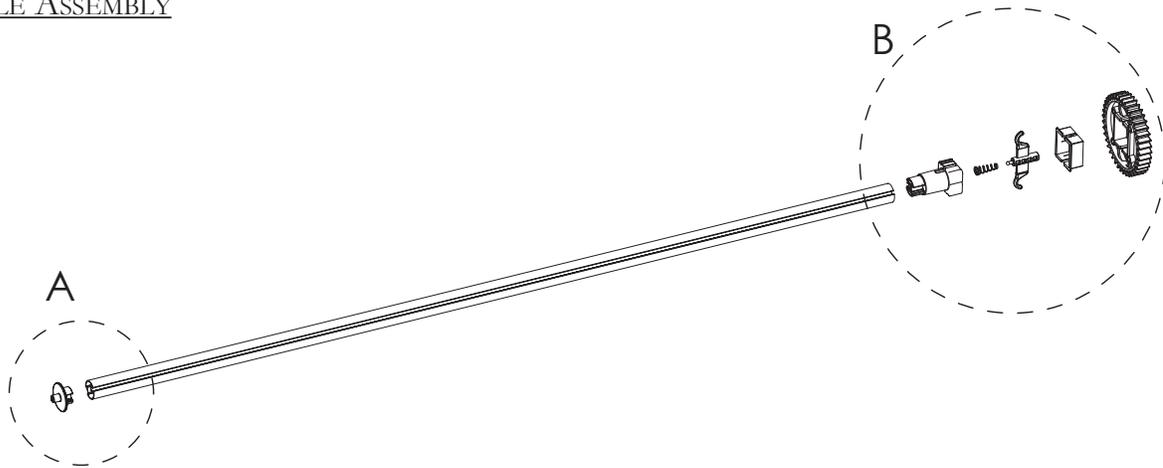
STEP 5: BRACE TO FRAME ASSEMBLY

PARTS NEEDED:	1 – LEFT AND RIGHT FRAME END	2 – ASSEMBLED BRACE SET
	4 – 1/4" X 60MM CONNECTOR BOLT	4 – 1/4" RECTANGLE NUT



- Note that the two sets of braces are interchangeable as the upper and lower sets.
- Begin with the Lower Brace. Align the keyed end of the brace into the slots located on the inside of the Back Legs.
- Place a 60mm connector bolt through the hole of the Back Leg (from the outside) and into the keyed end of the brace.
- Place a rectangle nut in the cross slot of the brace so that its threaded hole lines up with the bolt. Thread the bolt through the rectangle nut and completely tighten using the allen wrench. Repeat these instructions for both ends of the brace.
- Now position the Upper Brace assembly into the slots of the Pole Mount End, as pictured.
- Repeat the steps above using the 60 mm bolts and rectangle nuts, completely tightening all connector bolts with the allen wrench.
- NOTE! CONTINUE TO LEAVE THE HEX BOLTS THAT CONNECT THE BRACES TO EACH OTHER LOOSE AT THIS POINT.

STEP 6: POLE ASSEMBLY



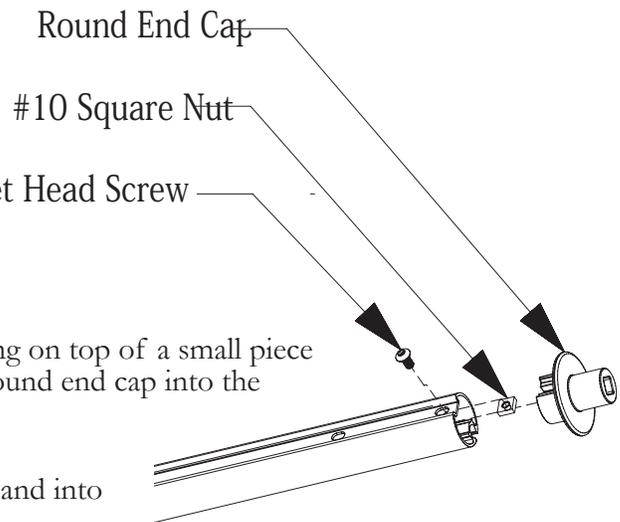
PART A: "B" and "C" Pole Assembly

PARTS NEEDED: 3 – "B" POLE (14") OR "C" POLE (36")
3 – ROUND END CAP
3 – #10 SOCKET HEAD SCREW

- First you will install one round end cap on the end of each "B" Pole (14") or "C" Pole (36").

- In your round end caps you will find a square nut resting on top of a small piece of tubing. This will make assembly easier. Place the round end cap into the end of the "B" Pole (14") or "C" Pole (36").

- Next, insert a #10 socket head screw through the hole and into the square nut of the end cap.



PART B: "A" Pole Assembly

PARTS NEEDED: 3 – "A" POLE (57-11/16") 3 – 40-TOOTH RATCHET WHEEL
1 – 4TH POLE HAND WHEEL 3 – QUICK RELEASE POLE HOOK
3 – SPRING 3 – POLE CAP

- First you will install one square end cap on the end of each "A" Pole (57-11/16").

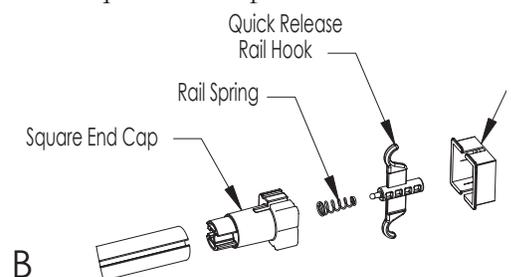
- In your square end caps you will find a square nut resting on top of a small piece of tubing. This will make assembly easier. Place the square end cap into the end of the "A" Pole (57-11/16").

- Then attach the Rail Springs to the ends of the Quick Release Hooks. This is done by slipping the springs over the knob as pictured.

- Place the Quick Release Hook assembly into the slots that are cut into the square end cap.

- Next place a plastic Pole Cap onto the end of each square end cap. The slotted side of the Pole Cap goes in the inside (Pole Cap is pre-installed inside of Ratchet Wheel).

- You will put the ratchet wheel on the end of this assembly later.



PART C: Connecting Pole to Pole

TWIN PARTS NEEDED: 1- "A" POLE (57-11/16")
1-COUPLER

1- "B" POLE (14")
2- #10 X 3/8 PAN HEAD SCREW

QUEEN PARTS NEEDED: 1- "A" POLE (57-11/16")
1-COUPLER

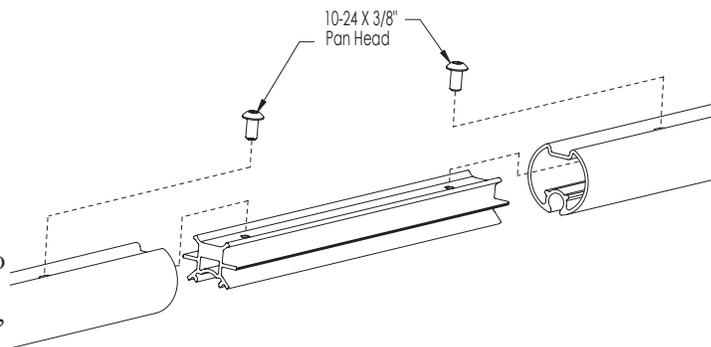
1- "C" POLE (36")
2- #10 X 3/8 PAN HEAD SCREW

KING PARTS NEEDED: 1- "A" POLE (57-11/16")
1- "C" POLE (36")
4- #10 X 3/8 PAN HEAD SCREW

1- "B" POLE (14")
2-COUPLER

- First match the pole assembly size with the size you selected for the braces. Look at the chart below to see which poles are needed for the desired size.

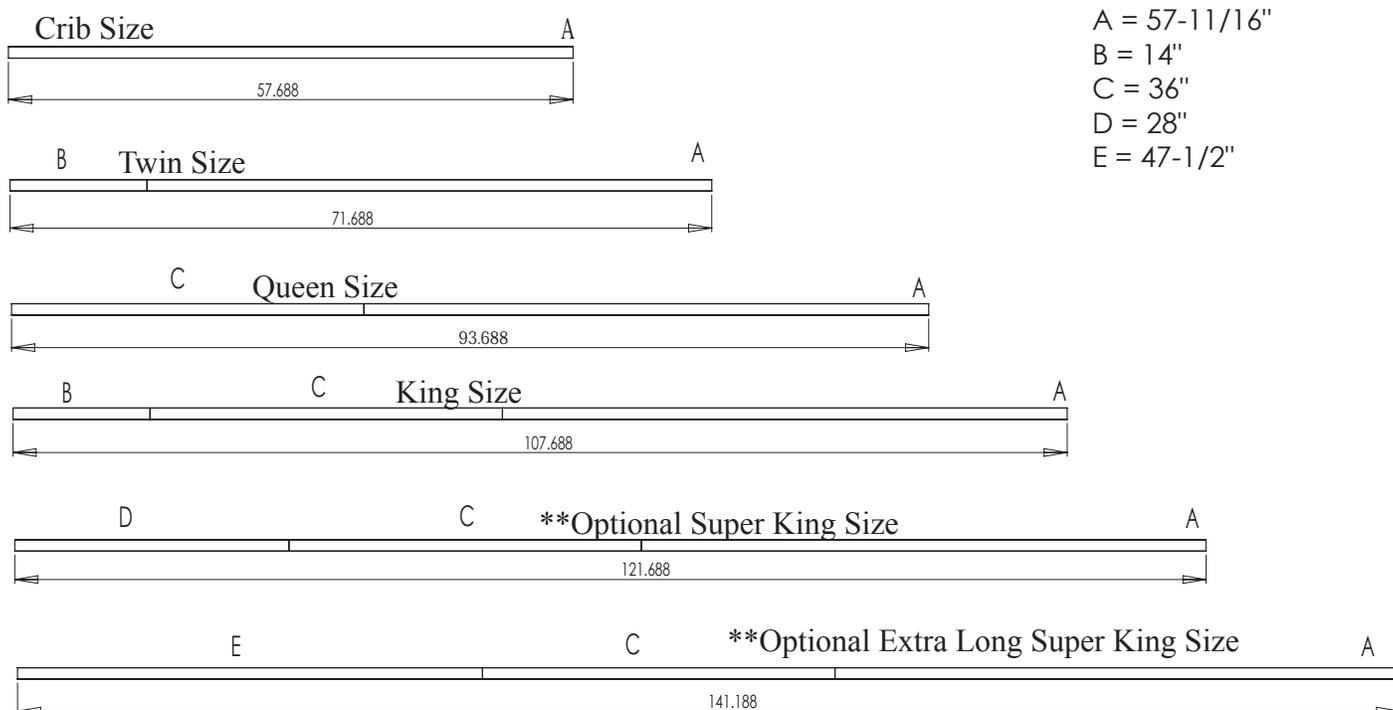
- You will want to insert one end of the coupler into the end of the "A" Pole (57-11/16") that does not have the square end cap on it. Insert a #10 x 3/8" pan head screw through the hole of the pole and into the threaded hole of the coupler. Tighten the screws completely.



- The you will put the other end of the coupler into either the "B" Pole (14"), if you are setting your frame up in Twin. If you are setting up in Queen or King you will attach the "C" Pole (36") to the coupler on the "A" Pole (57-11/16). If you are setting up in the king size then you will attach the "B" Pole (14") to the "C" Pole (36").

RAIL ASSEMBLY (BY LENGTH OF QUILTING SPACE)

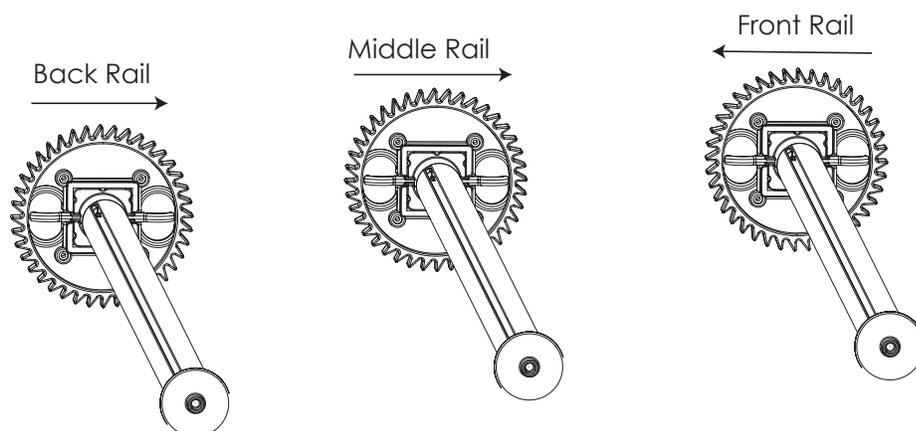
Quilt must be at least 1" smaller than the overall length of



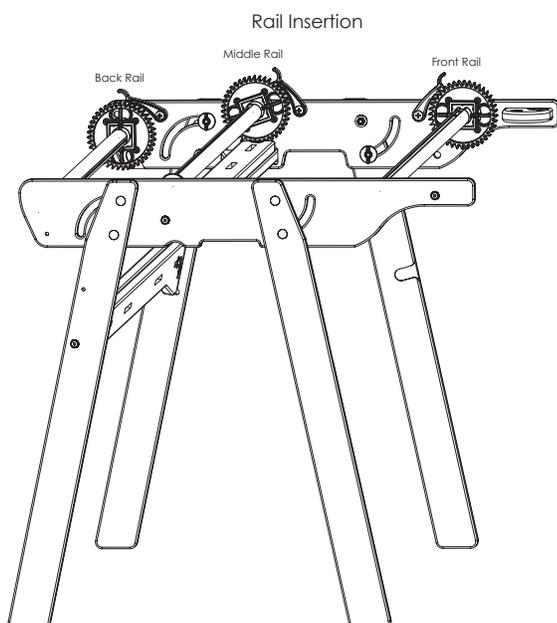
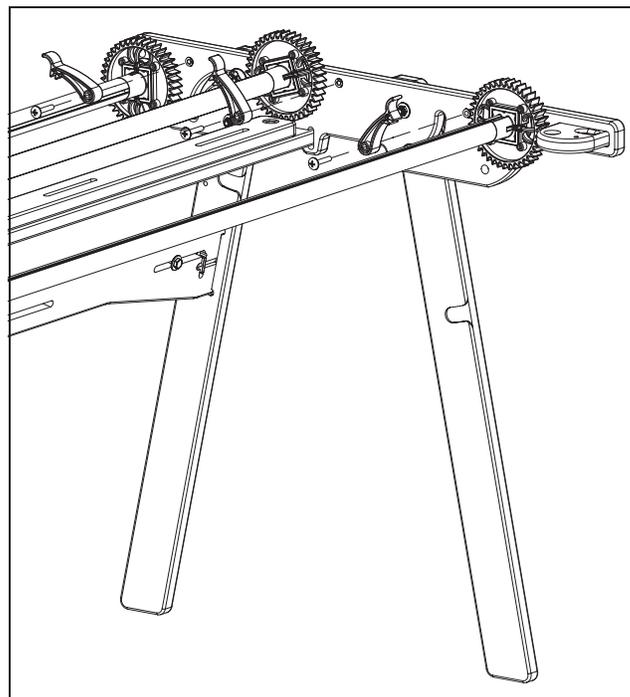
STEP 7: POLE TO FRAME ASSEMBLY

PARTS NEEDED: 3 – ASSEMBLED POLES
 3 – RATCHET STOPS
 3 – 1/4" x 1 1/2" TRUSS BOLT

*****IMPORTANT:** Before completing the next step, keep in mind that the truss bolt should be about 1/4" too long. **THE BOLT SHOULD NOT BE TIGHTENED WITH ANY TOOL. TO AVOID DAMAGE, ONLY FINGER-TIGHTEN THIS BOLT.**



- Install the three ratchet stops as illustrated using the truss bolt into the metal inserts of the Right Pole Mount End.
- **TIP:** Observe the direction of the Ratchet Wheel teeth as illustrated and follow while assembling the quilting poles to the Pole Mount Ends.
- Slip a Ratchet Wheel onto the end of one "D" Pole. Position the end of the pole that **does not have the Ratchet Wheel on it** into the **LEFT FRONT HOLE** in the Left Pole Mounting End (just inside the lamp holder). (NOTE: There are three hole options giving you slight height adjustment. Be sure to place each end in the same level hole).



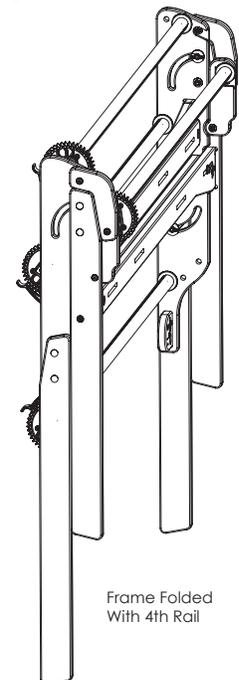
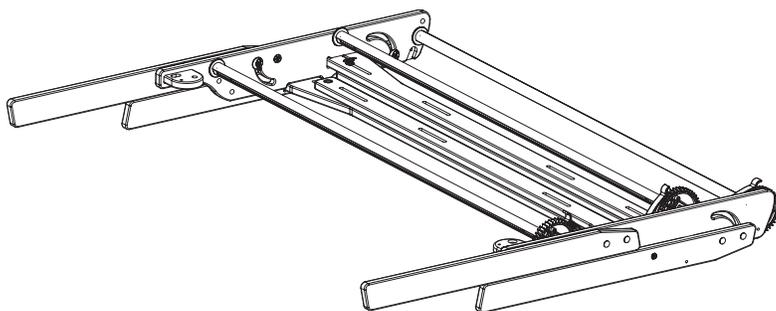
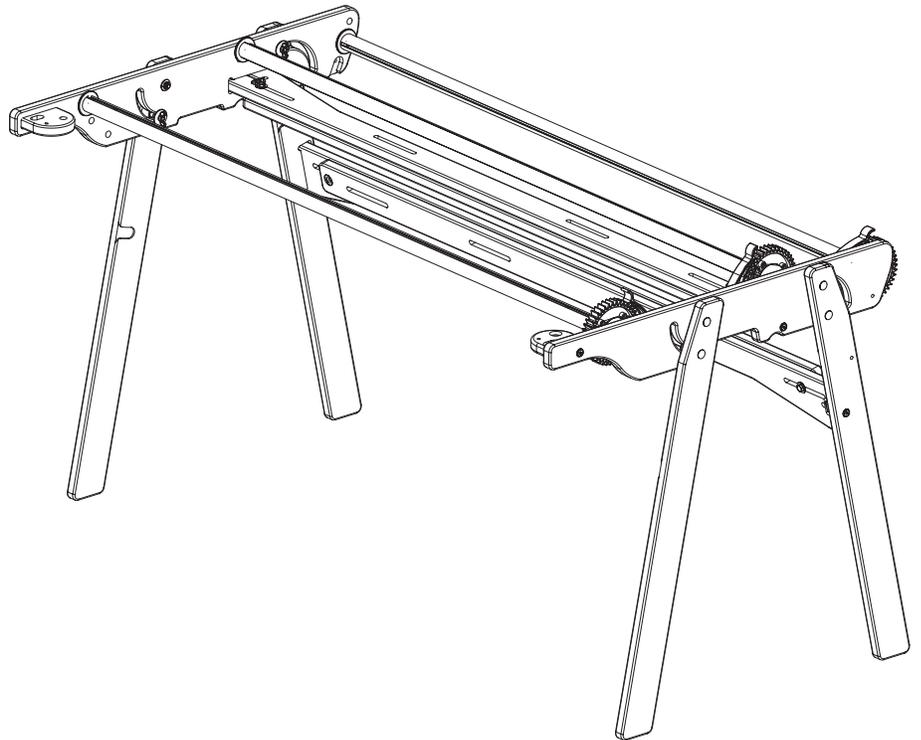
- As you position the Ratchet Wheel end of the pole into the Right Pole Mounting End, pull the Quick Release Hook back, and then release it into the hole. Test the Ratchet Stop to make sure it fits snug into the teeth of the wheel. If it does not, slip the wheel off and flip it around so the teeth go the other direction.
- Complete the above steps for the two other poles with Ratchet Wheels. Remember, the wheel rotation will be opposite from the wheel on the front pole.

STEP 8: FINAL FRAME ADJUSTMENTS

- After all the poles are in place, adjust the Upper Brace so that all the poles will roll freely but will not move much from side to side.
- Tighten the 5/16" hex-head bolts that are in the slots on the Upper Brace.
- **Adjust the Lower Brace so that the tilt action will move smoothly and easily.**
- Tighten the 5/16" hex-head bolts that are in the slots on the Lower Brace.
- Double-check the Brace to Stand Assembly, making sure all connections are completely tightened.

FOLDING AND STORING THE A34™

- Folding the A34 is a very basic, tool-free process.
- Loosen the plastic knob at each leg/end piece connection on the inside of the Right and Left Ends.
- As you loosen the last plastic knob, you will want to stabilize the frame to prevent it from collapsing.
- With all four plastic knobs loosened, grip the frame by the front and middle (or back) poles and lift up.
- Gently let the frame down, allowing the legs to fold in, parallel with the end pieces.
- Retighten the four plastic knobs so the legs hold their folded position.
- The A34 can be stored leaning against a wall, or lying flat on the floor. If lying the frame flat, be cautious about floor moisture affecting the frame.



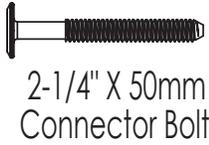
Frame Folded
With 4th Rail

Assembly & Use of Accessories

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

Assembly and Use of 4th Pole Kit

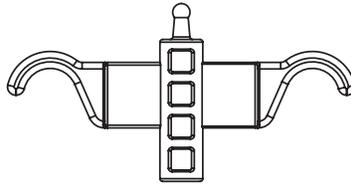
Fourth Rail Parts Lists



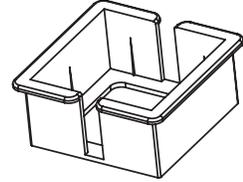
2-1/4" X 50mm
Connector Bolt



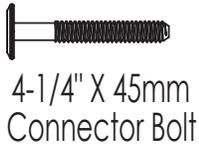
1-Spring



1-Quick Release
Pole Hook



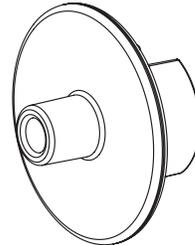
1-Pole Cap



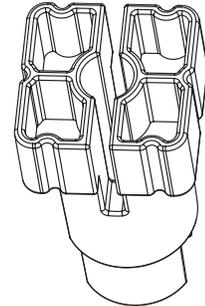
4-1/4" X 45mm
Connector Bolt



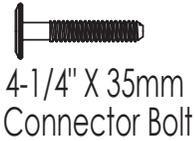
4- 10-24
Socket Head
Screw



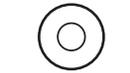
1-Round End
Cap



1-Square End
Cap



4-1/4" X 35mm
Connector Bolt



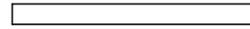
6-1/4" Flat
Washer



6-1/4" Nylock
Nut



1- 36" Aluminum Pole



1- 14" Aluminum Pole

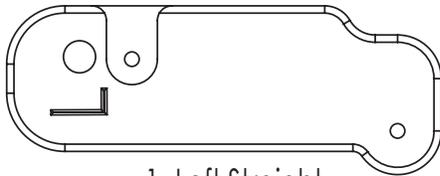
1- 105" Fabrifast Tubing



1- 57-11/16" Aluminum Pole



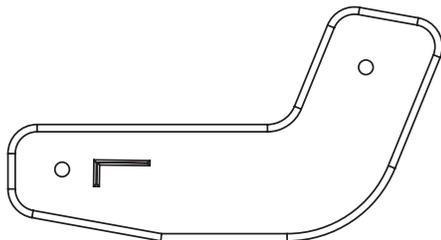
2- Aluminum
Pole Coupler



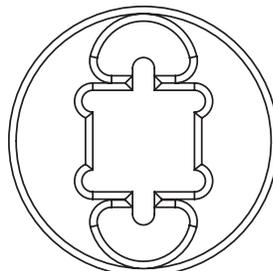
1- Left Straight
Wood Bracket



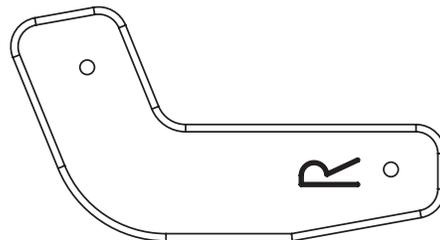
1- Right Straight
Wood Bracket



1- Left Angled
Wood Bracket

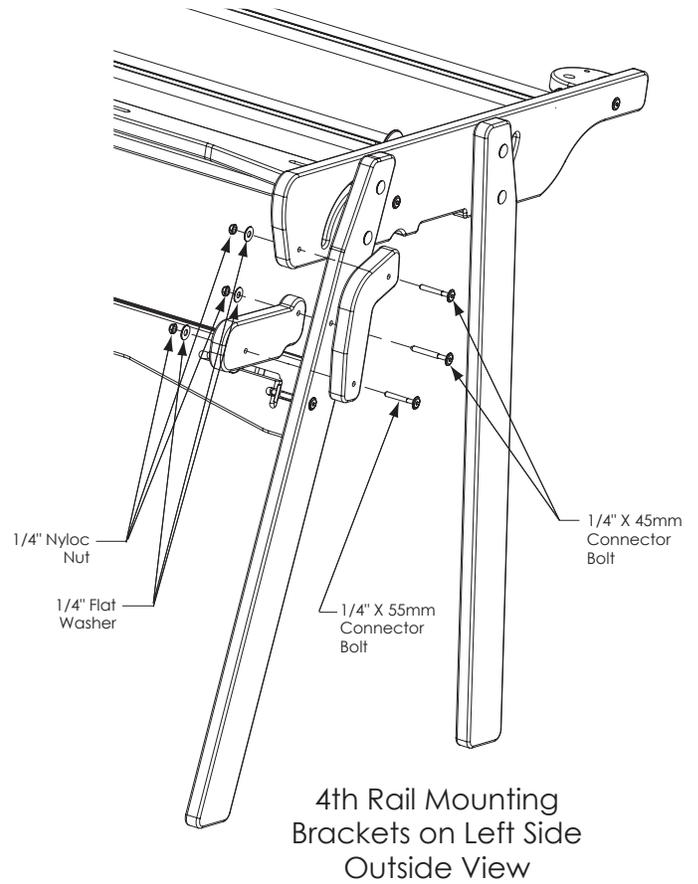
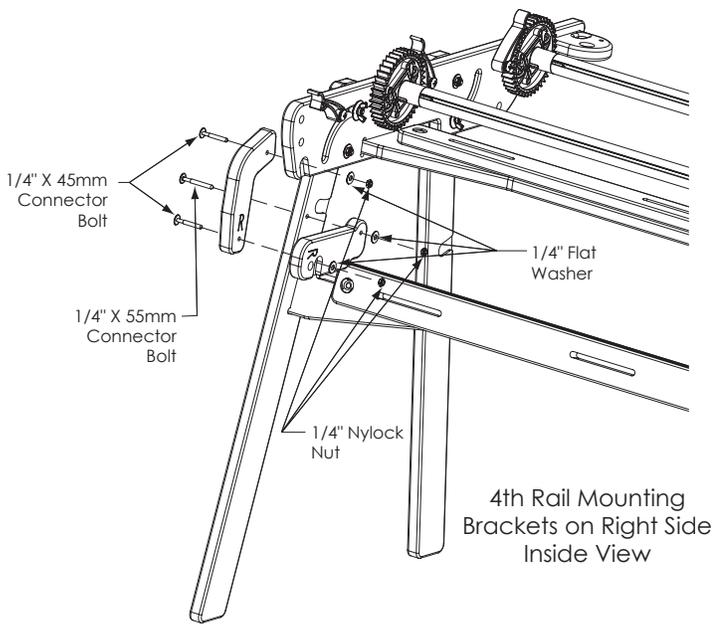


1-4th Pole
Hand Wheel



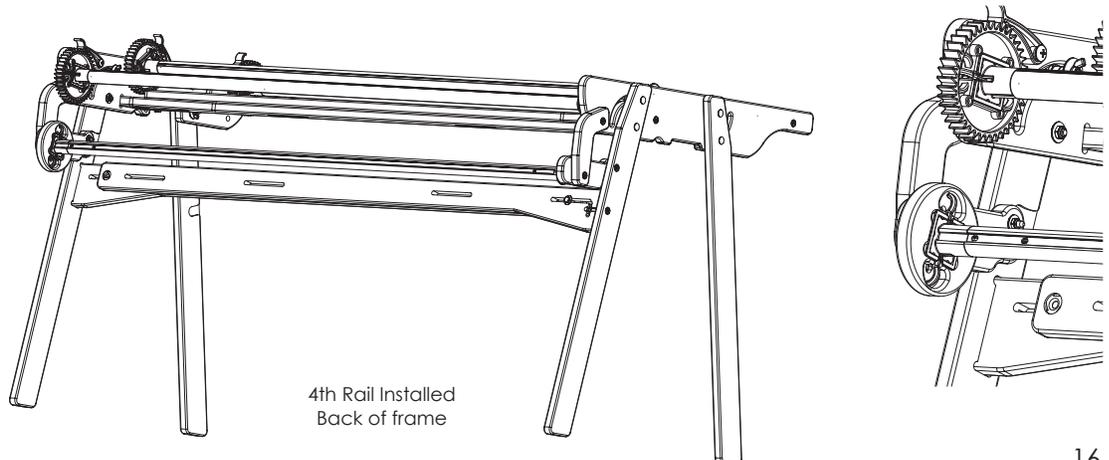
1- Right Angled
Wood Bracket

- First connect the Angled Wood Brackets to the Left and Right End pieces.
- The short leg of the Angled Wood Bracket connects to the End piece using the 45 mm connector bolt, washer and nylock nut (as pictured) with the longer leg of the Angled Wood Bracket pointing down.
- Next connect the Straight Wood Bracket to the Left and Right back Legs using the 50mm connector bolt, washer and nylock nut (see right).
- Be sure the cut-out surrounding the bottom hole of the Straight Bracket faces toward the inside of the frame.
- Now connect the Straight and “L” Wood Brackets together using the 45mm connector bolt, washer and nylock nut.



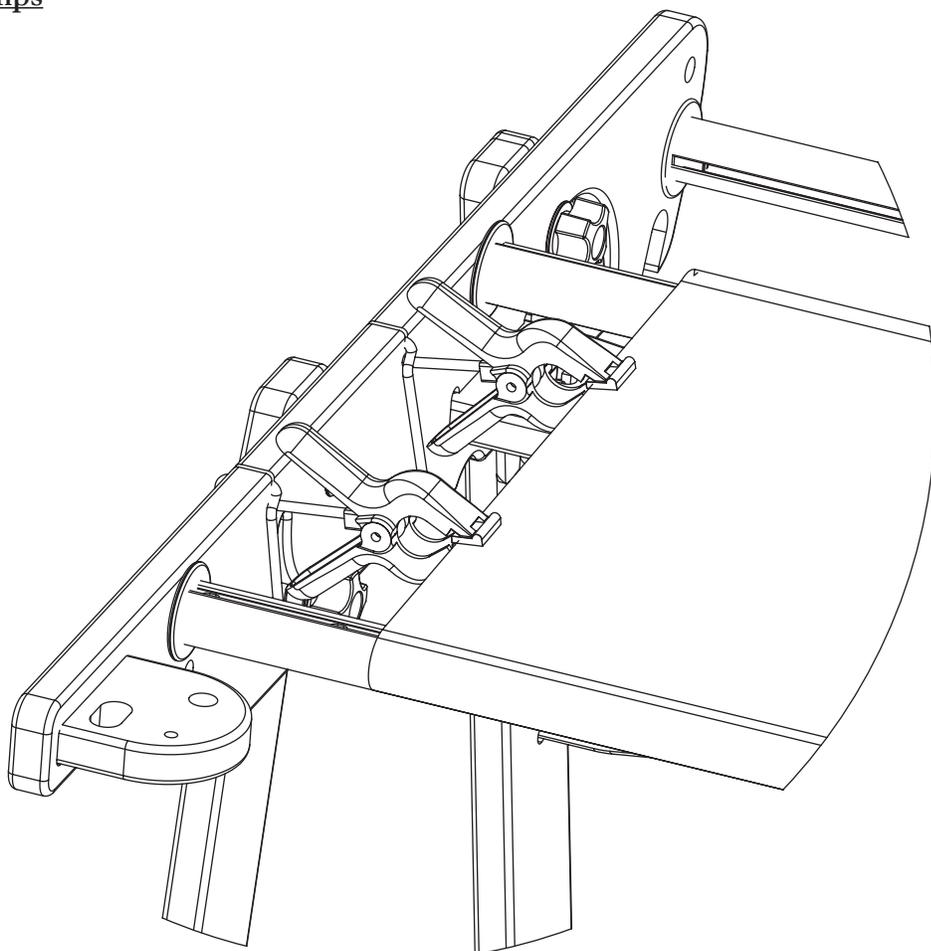
- With this bracket assembly in place on both the Left and Right Ends, you are ready to insert your pole. Follow pole assembly instructions on pages 11 and 12 (Assemble the 4th Pole so it is the same length as the other three). Be sure to put a nylon washer on each end of the pole.

Completely tighten all nylock nuts in this assembly



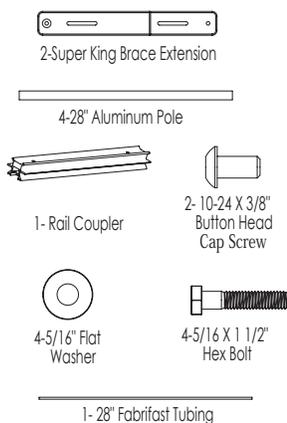
Application and Use of Bungee Clamps

- 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.

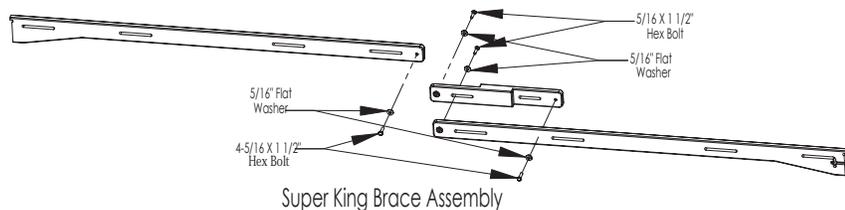
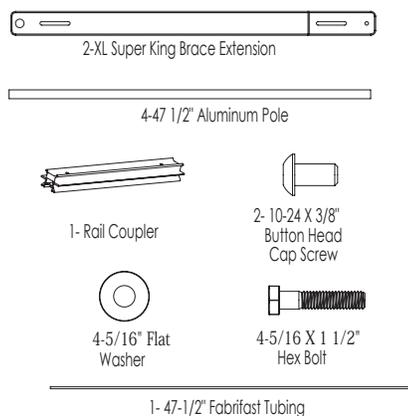


SuperKing™ and Extra Long SuperKing™ Extension Assembly

Super King Extension Kit



Extra Long Super King Extension Kit



- These kits extend your frame to 123" (S.K.) and 143" (Extra Long S.K.) to handle over-sized quilts.

- The assembly configuration pictures for the SuperKing™ Extension Pole are located on page 14. The Brace assembly configuration pictures for the SuperKing™ Extension set-up are located on page 9. Follow those pictures and directions as you set up the frame into the SuperKing™ or Extra Long SuperKing lengths.

Installing Fabric and Quilting with your A34™

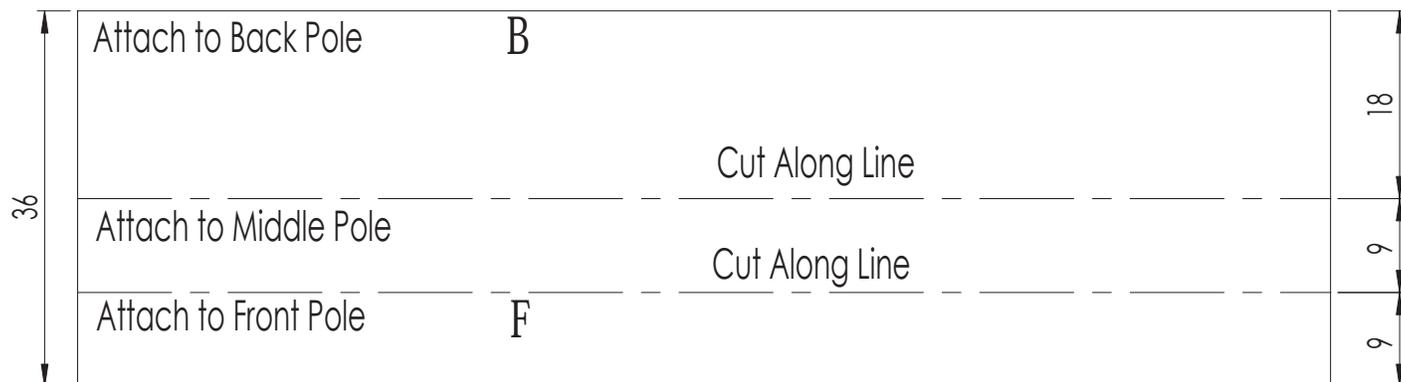
Use of Optional Cloth Leaders

Your quilt fabrics may be inserted directly into the poles. However, using cloth leaders is a much better way to attach your quilt. Cloth leaders are easy to make, and they allow the quilter to move the last few inches of the quilt forward from the rear pole to the front quilting area. That way you are able to complete your whole quilt without having to take it of your frame.

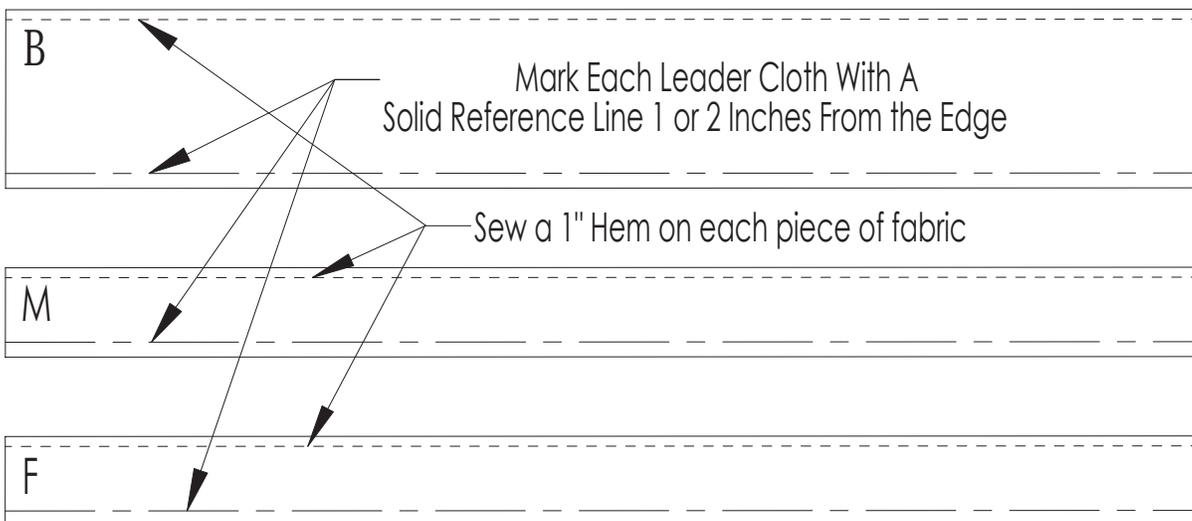
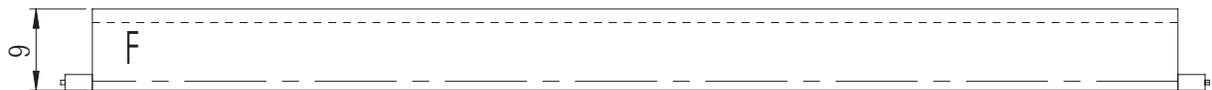
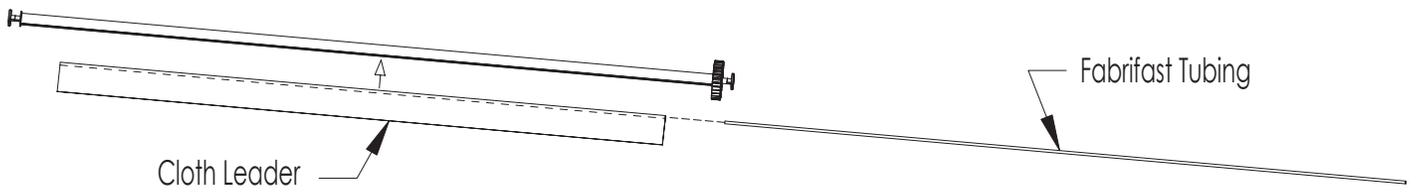
This is a suggestion for making one kind of cloth leaders. There are many ways and ideas for making these leaders. Don't be worried about trying your own idea. Just remember that the widest strip of fabric should be applied to the rear pole. This allows the whole quilt to come up into the area of quilting without stopping and adjusting the quilt top to the second pole in order to finish it.

The best cloth selection for making cloth leaders is unbleached muslin.

Purchase: 1 ½ yards for 58" pole (crib)
 2 yards 72" pole (twin)
 2 2/3 yards for 94" pole (queen)
 3 yards for 108" pole (king)



- < **Step 1.** Cut the fabric as shown in illustration on the previous page.
- < **Step 2.** Finish both of the the cut edges of the leaders with either a serge stitch or with a very straight 1/2" hem allowance. **Press the leader cloth with a warm iron.**
- < **Step 3.** Draw a straight, dark, solid line 1 1/2" from one edge of each of the leader cloths.
- < **Step 4.** Place your fabric on the pole with your straight, dark, solid line over the groove in the pole. Then you will push your fabrifast tubing into the pole with your FabriFast Tool, as illustrated belwo
- < **Step 5.** Pin or baste your quilt fabrics to the cloth leaders. Use your hem line on your cloth leaders in Step 2 to lign your quilt fabrics up with so it is on straight.
- < **Step 6.** Roll the Cloth Leaders and Quilt Fabrics up on Poles.
- < **Step 7.** You are now ready to begin quilting.



Installing Fabric on the A34™

Step 1. BACKING FABRIC

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 2" to 4" larger than the top on all four sides, especially if your top is a pieced top.

(A pieced top may possibly 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 or can be made by sewing fabric together.

Piecing the Backing fabric:

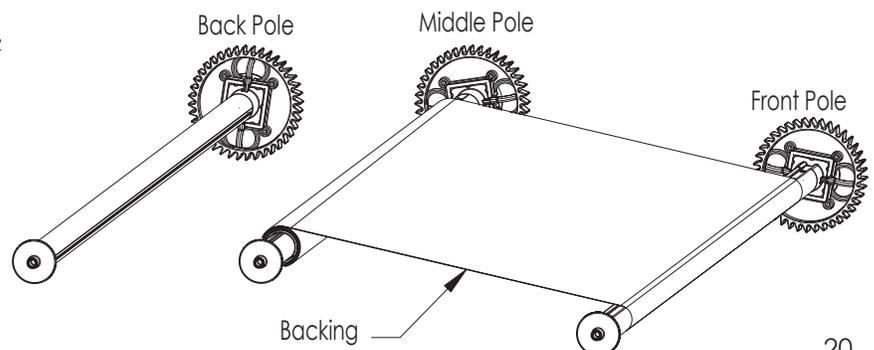
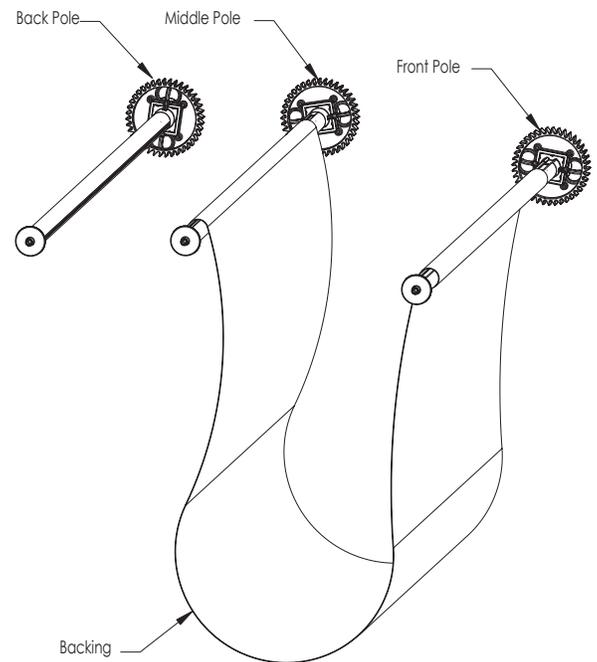
Cut the selvages before you piece the back fabric together. The selvedge is woven more tightly than the rest of the fabric and won't have the same "give" as the rest of the fabric which can cause the seam to be too tight. Use a slightly larger machine stitch than used in normal sewing when piecing the lengths of the back fabric together. 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. You can also sew your back fabrics together using crosswise piecing.

Front Pole–Backing fabric

1. Mark the center of **Backing fabric** with a pin or a pencil mark.
2. Pin the center mark to the center of the front pole cloth leader. (The **Backing fabric** is put on with the wrong side of the fabric up and facing you.)
3. Lay the fabric naturally and evenly along the straight edge of the pole. **Do not stretch the fabric.** Pin the corners of the fabric to the cloth leader on your pole.
4. Add a few more pins to hold the material on the cloth leader on your pole.

Middle Pole–Backing fabric

1. Pin the other end of the **Backing fabric** to the middle quilting pole, centering with the mark as directed on the front pole.
2. Pin the center mark to the center of the middle pole's cloth leader.
3. Lay the fabric naturally and evenly along the straight edge of the middle pole. Do not stretch the fabric. Pin the corners of the fabric to your cloth leader.
4. Measure the amount of your rail that is showing at the edges of the fabric to the end boards. This measurement should equal the amount showing on the front pole.
5. Securely pin the **Backing fabric** along the entire edge of the middle pole's cloth leader, using plenty of pins.

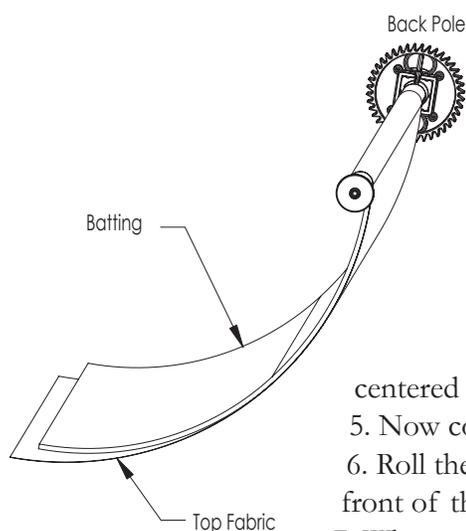


Rolling the **Backing fabric** onto the middle pole

1. Roll the material onto the middle pole, making a smooth roll. Be sure there are no wrinkles present.
2. Smooth the quilt from the center to the outside edges of the pole as it is being rolled. **At this point do not roll the fabric tightly, just roll it nicely smooth and even.**
3. Roll until there is very little slack between the two poles.

IMPORTANT: Now, from the front of the frame, look at the fabric and readjust the fabric on the front pole if necessary. Sometimes, due to an uneven grain line of the fabric, the fabric will be loose in one area and tighter in another. First, try rolling the fabric completely from the middle pole to the front pole and then back to the middle pole again. Then if this did not adjust the fabric, simply even the tension by adjusting the pins on the front pole's cloth leader. After adjusting the tension add additional pins to hold the fabric on the cloth leader.

NOTE! Fabric should never be tight. For best results, use as little tension as possible without letting the Quilt Sag.



Batting and Quilt Top

1. Lay the Quilt Top face down on the floor and line your batting directly over it.
2. Mark the center of the Top.
3. Line up the edge of the Quilt Top/Batting to the inside back pole as shown.
4. Pin the center of the Top/Batting to the center of the rear pole. Pin the corners. Make sure that the Quilt Top is centered with the Backing already installed on the middle and front poles.
5. Now completely pin the fabric edge.
6. Roll the Top/Batting up and onto the rear pole by rolling the pole away from the front of the frame. Make sure it rolls smoothly.
7. 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 pole.

8. Completely pin the Batting and Quilt Top moving from the center out to each corner.

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

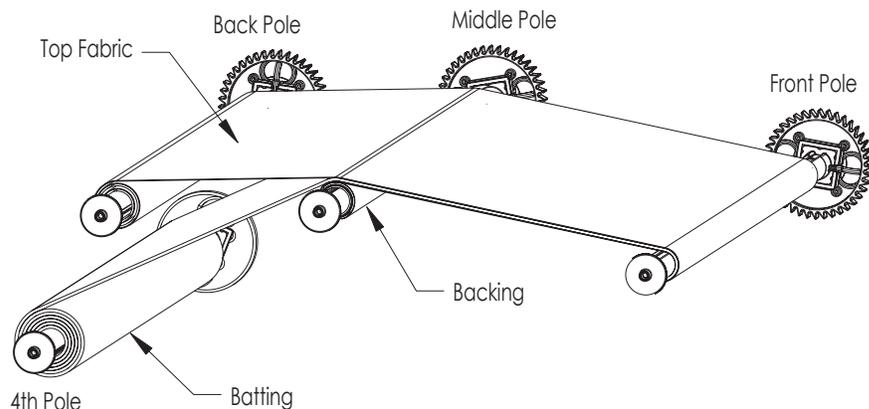
10. On the rear pole, measure the pole from quilt edge to End Board. This measurement should be equal to the Quilt Top edge to End Board measurement of the Front Pole.

Adjust the tension to the Backing Fabric and Batting and Quilt Top Fabrics until you get the desired tensions. **DO NOT OVER TIGHTEN!**

OPTIONAL 4th Pole BATTING INSTALLATION

1. Center the **batting** on the front pole over the **backing** and pin down with a few pins. Smooth **batting** over the back to the middle pole and let the **batting** drape to the floor between the **middle pole and the 4th pole.**

2. At this point, leave the batting draped to the floor. You will roll it onto the fourth pole after applying the quilt top.



Trouble Shooting

Problem: Fabric sags on one side or in middle.

Solution: 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. (See illustrations on top of next page)

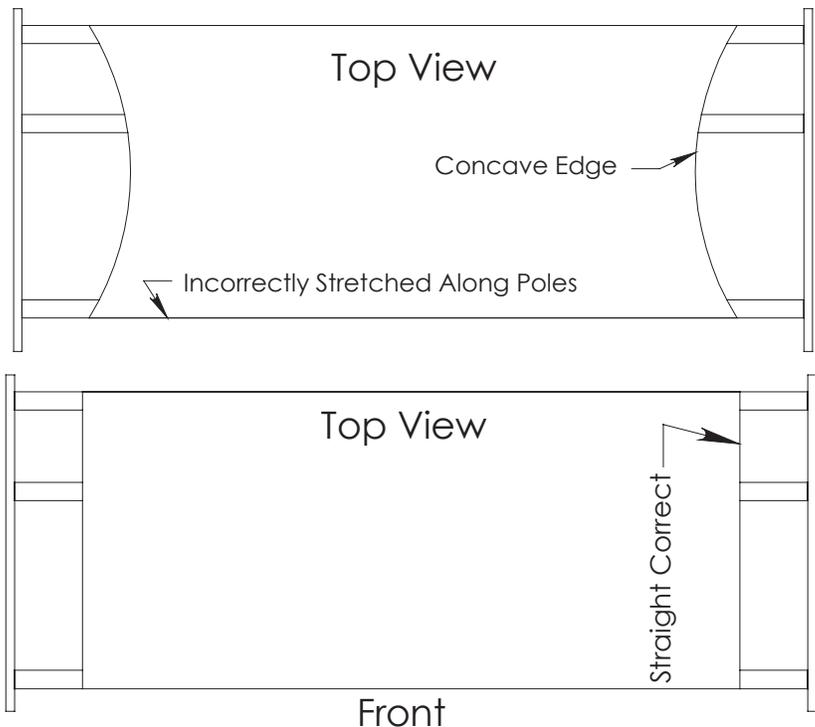
Solution: The fabric was stretched along the pole. Take the fabric off and let it relax until it is not misshapen and then re-install, without stretching it along this edge.

Problem: Quilt backing is much longer than quilt top, after quilting.

Solution: Monitor tension of backing and quilt top. Mark on edges of fabrics every six inches on backing and quilt top and as you roll you will be able to monitor the tension.

Problem: Batting tears or separates during the tightening of the ratchet wheels.

Solution: The batting was stretched and stressed. The batting should be longer than the quilt that you are making and there should not be tension applied to it. Check the 4th pole to make sure that it is rolling smoothly and easily.



Problem: Poles are bowing in.

Solution: The causes may be: 1. Seam down the center of the fabrics may be sewn too tight 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 poles instead of smoothly laid along the pole then attached.

Problem: Poles squeak as they roll or they do not roll freely.

Solution: **The frame is not square!** Square it up with the floor using a carpenter's square or an uncut piece of poster board or a picture frame. If the quilting frame still squeaks after making sure that the frame is in good square alignment.

Pointers for Quilting, and Especially Tying:

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 poles). 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.

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 roll past you last row of ties.**

The preceding are tips for common questions and problems that are easily solved based on years of experience and understanding of no-baste quilting. If you are experiencing continued difficulties using your GraceFrame, please know that we are eager and able to help! **Call us at 1-800-264-0644.** Office Hours: Mon-Fri 8 am – 5 pm.