YOU WILL NEED TO PURCHASE:

5 pieces of 1-1/4" thin wall metal conduit (EMT) cut to your preferred length for the rollers. (Maximum 120")

DETERMINING YOUR ROLLER LENGTH:

Determine the width of the widest quilt you would like to make on the frame. Add a minimum of 8" to that width for your final roller length. The extra 8" allows for extra room for your machine at the sides of the quilt. You also may want to have an open space at the end of your frame to wheel your machine out from under the quilt for maintenance.

If you would like to have 2 sets of rollers, we have a hardware package available. Please call (319) 378-0999 or visit our website at www.hinterberg.com.

STAINING & FINISHING:

Applying a stain and finish to the frame is optional. It will not harm it to leave it unfinished. If you wish to stain or finish your frame, it is easier to do before you assemble it. What stain you use depends on your own preference, but we recommend using a penetrating oil base wipe-on stain or a combination stain/polyurethane for best results. Since there are moving parts on your frame, we do not recommend any finish like varnish or shellac that build up on the surface of the wood.

Please see our website www.hinterberg.com or call (319) 378-0999 or email info@hinterberg.com with questions.
Stretch Machine Quilting Frame
## STRETCH FRAME HARDWARE

### End Frame Hardware

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PART#</th>
<th>QTY.</th>
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</thead>
<tbody>
<tr>
<td>Black Star Knob</td>
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<td>14</td>
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<tr>
<td>Lock Pin</td>
<td>3105</td>
<td>4</td>
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<tr>
<td>Wood Screw</td>
<td>3028</td>
<td>14</td>
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<tr>
<td>Plastic Washer</td>
<td>3037</td>
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</tr>
<tr>
<td>1/4” Metal Washer</td>
<td>3021</td>
<td>3</td>
</tr>
<tr>
<td>2” Carriage Bolt</td>
<td>3054</td>
<td>4</td>
</tr>
<tr>
<td>Lag Screw</td>
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<td>3</td>
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<tr>
<td>Height Adj. Assembly</td>
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### Leg Extender Hardware

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<thead>
<tr>
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<td>Allen Head Bolt</td>
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<tr>
<td>Leveler Mount</td>
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### Leg Brace Hardware

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<tbody>
<tr>
<td>Black Knob w/ stud</td>
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<tr>
<td>3/8” Hex Nut</td>
<td>3029</td>
<td>4</td>
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<tr>
<td>J-Hook</td>
<td>3045</td>
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<tr>
<td>1/4” Metal Washer</td>
<td>3021</td>
<td>8</td>
</tr>
<tr>
<td>1/4” Wing Nut</td>
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### Roller End Hardware

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<tr>
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<td>3</td>
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<tr>
<td>Hex Head Bolt</td>
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<tr>
<td>Roller End Insert</td>
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<td>Hex Wrench</td>
<td>3049</td>
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### Center Support Hardware

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<td>Allen Head Bolt</td>
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<tr>
<td>2” Carriage Bolt</td>
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<td>1</td>
</tr>
<tr>
<td>3/8” Metal Washer</td>
<td>3022</td>
<td>1</td>
</tr>
<tr>
<td>1/4” Metal Washer</td>
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<td>4</td>
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<tr>
<td>1/4” Wing Nut</td>
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<tr>
<td>3/8” Wing Nut</td>
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<tr>
<td>Allen Wrench</td>
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### Tools Required

- Phillipshead screwdriver
- Hammer

### Pointer Package Hardware

— Included see page 19
## STRETCH FRAME WOOD PARTS

<table>
<thead>
<tr>
<th>Part #</th>
<th>Qty.</th>
<th>Description</th>
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</thead>
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<tr>
<td>A 4045</td>
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<td>Left End Frame</td>
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<tr>
<td>B 4046</td>
<td>1</td>
<td>Right End Frame</td>
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<tr>
<td>C 4049</td>
<td>1</td>
<td>Right double roller support</td>
</tr>
<tr>
<td>D 4050</td>
<td>1</td>
<td>Left double roller support</td>
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<tr>
<td>E 4056</td>
<td>2</td>
<td>Angle Brace 1</td>
</tr>
<tr>
<td>F 4057</td>
<td>2</td>
<td>Angle Brace 2</td>
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<tr>
<td>G 4047</td>
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<td>Left template support</td>
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<tr>
<td>H 4048</td>
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<td>Right template support</td>
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<tr>
<td>I 4053</td>
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<td>Circular Spacer</td>
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<td>J 4017</td>
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<td>Ratchet Wheels</td>
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<tr>
<td>L 4016</td>
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<td>Left Front Roller Support</td>
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<tr>
<td>M 4011</td>
<td>1</td>
<td>Right front spacer</td>
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<tr>
<td>N 4012</td>
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<td>Left front spacer</td>
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<tr>
<td>O 4013</td>
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<td>Triangular pawl</td>
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<tr>
<td>P 4014</td>
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<td>Straight pawl</td>
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<td>Q 4058</td>
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<td>Extender Leg w/ levelers</td>
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<tr>
<td>R 4081</td>
<td>1</td>
<td>Top support w/ square hole</td>
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<tr>
<td>S 4082</td>
<td>1</td>
<td>Top support w/ round hole</td>
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<tr>
<td>T 4083</td>
<td>1</td>
<td>Center Support Upright</td>
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<tr>
<td>U 4076</td>
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<td>Center Support Roller Bracket</td>
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<tr>
<td>V MQFST UC</td>
<td>1</td>
<td>Upper Carriage</td>
</tr>
<tr>
<td>W MQF ST LC</td>
<td>1</td>
<td>Lower Carriage</td>
</tr>
</tbody>
</table>
END FRAME ASSEMBLY INSTRUCTIONS

Locate bag of hardware labeled “end frame hardware”

STEP 1.
Assembling Front Roller Supports
Use 1 1/4” Phillips head wood screws to attach the spacers to the front roller supports, matching slots and pre drilled holes. See Fig. 1

STEP 2.
Attaching the Pawls
The pawls are only attached to the right spacer and the right double roller support. Insert a 1-1/2” Lag screw and metal washer through the ratchet pawl as shown in Fig. 2. The small plastic washer, goes between the pawl and the pole support to make the pawl work smoothly. Tighten the screw so the pawl swings easily. You will need to use either a 7/16” wrench or the Hex Head Wrench found in the bag labeled “Roller End Hardware”. See Fig 2a and 2b for correct placement of the pawls.
STEP 3. Template Support
Locate the right end frame and the right template support. Both inside and outside edges of the end frames are rounded over. The template supports are only rounded over on one edge. The flat side goes against the end frames for a close fit. Lay the end frame on a flat surface and attach the right-hand template board support with five 1 1/4" Phillips head wood screws. See Fig 3.

STEP 4. Height Adjusters
Lay the right side end frame on a flat surface. Fig 4. Locate the height adjuster assemblies.
Lay two height adjuster bolts into the holes in the end frame. (The hole is slightly oval to allow for minor variations in wood.) Notice the hole in the barrel nut is off center. The smaller end faces outward towards you. See Fig. 4a

STEP 5. Assembling Roller Supports
Holding the double roller support in your hands, flip it over and place it as shown in Fig 5.

STEP 6. Attaching Roller Supports
Insert a 2" carriage bolt through the slots in the roller support and through the corresponding hole in the end frame. The square base of the head of the bolt should sit down in the slot. Lift up the end frame slightly and screw a black knob onto this bolt from the outside of the frame to hold it in place. See Fig 6.
STEP 7.
Attaching Front Roller Support
To attach the front roller support to the double roller support, insert the aluminum bearing (attached to the double roller support) into the large hole in front roller support. See Fig. 7.

Fig. 7a & 7b shows the outside view of the completed right side end frame.

Insert a lock pin as shown to hold front roller support in either the up or down position.

STEP 8.
Left Hand End Frame Assembly
The left hand roller supports have rounded ends, and are attached in the same manner as the right.
Repeat steps 3 through 7 to complete the left hand end frame assembly in the same manner.
The left side of the frame does not have pawls attached. Fig 8 shows completed left end frame.
LEG EXTENDER ASSEMBLY INSTRUCTIONS

Locate bag of hardware labeled “Leg Extender Hardware”

STEP 1.  
Attaching Levelers
Screw in the leveler mounts into the bottom of each of the 5 legs. See Fig. 9

STEP 2.  
Attaching Extender Legs
These legs will allow you to adjust the height of your frame for a sitting or standing position. There are 6 holes in each leg. This allows for 4 different height settings, the 4th setting is the sitting position with the legs removed and the end frames directly on the floor.

Insert a small barrel nut into the holes in the end frame. **Blow out any sawdust in holes before inserting barrel nuts.** Insert allen head bolts through the corresponding holes in the leg, according to your desired height. Tighten these bolts into the barrel nuts using the allen head wrench. See Fig 9a. The remaining extender leg and hardware will be used with the center support.
IMPORTANT NOTE:
• If, in the future, you wish to make your frame longer or shorter, you can order additional metal inserts and required hardware to build additional rollers and carriage tracks. Call us at (319) 378-0999 for details.

ROLLER END ASSEMBLY INSTRUCTIONS

Locate bag of hardware labeled “roller end hardware”

STEP 1.
Inserting Metal Roller Ends
Tap the inserts into the end of the metal rollers evenly with a hammer. Don’t tap on the end of the bolt, because you may damage the threads. Tap around the edges of the silver round end. If it goes in unevenly at first, keep tapping, it should straighten itself out as it goes in. The metal edges of the insert should be seated on the ends of the roller. If the roller ends are rough, you can file them down. Repeat until all rollers have inserts on both ends. See Figs. 10 and 11.
RATCHET WHEEL ASSEMBLY INSTRUCTIONS

STEP 1.  
Assembling Ratchet Wheels
The 3 ratchet wheels will be attached to the right end of 3 of the conduit rollers. Using the hardware found in the roller end hardware bag, slip the 1/4” washer onto the hex head bolt and then screw the hex head bolt into the barrel nut only about 3 or 4 turns. Lay the bolt assembly into the pocket in the ratchet wheel. See Fig. 12.

**Note:** The bolt assembly must lay flat inside the pocket or it could rub against the inside on the end frame.

STEP 2.  
Attaching Ratchet Wheels to Poles
Slide the ratchet wheel onto the end of the conduit. The wheel should be flush with the end of the conduit. If the edges of the conduit are a little rough you will want to file them smooth for easier assembly. Tighten the hex head bolt using the hex head wrench provided. See Fig. 13. Just snug it up so the bolt assembly doesn’t fall out.

Repeat step 1 and 2 to attach ratchet wheels loosely to the ends of 3 of the conduit rollers.

STEP 3.  
Tightening the Roller Ends
Tighten all three ratchet wheels onto the conduit, flush with the ends of the rollers. See Fig. 14.

![FIG. 12](image12.jpg)

![FIG. 13](image13.jpg)

![FIG. 14](image14.jpg)
STEP 1.
Attaching Carriage Support Rollers
The two rollers without ratchet wheels are the carriage support rollers. These rollers provide the track for the carriage to ride along.
Locate the wooden circular spacer. See Fig. 15
The side of the spacer with the non-rounded over edge goes against the end frame.
Insert a roller without a ratchet wheel into the circular spacer and then into the hole on the end frame. Secure the roller on the outside of the end frame with a black star knob.
Repeat on other side.
Put second carriage support roller on back of frame. Screw a black star knob onto each of the roller end bolts loosely.
**LEG BRACE ASSEMBLY INSTRUCTIONS**

Locate bag of hardware labeled “leg brace hardware”

**STEP 1.**
**Angle Brace Assembly**
Locate the (4) angle braces. The angle braces anchor the carriage track to the end frames. This provides stability for the whole frame.
The angle brace is designed to hold the roller support with the J-hook bolts. The J-hooks are used to secure the angle braces to the front carriage support roller and the rear carriage support roller.
Place the leg brace on carriage track as shown in Fig. 17a. Insert a J-hook bolt thru the hole in the angle support and secure with a small washer and a wing nut on the inside of the frame.
The other end of the angle brace attaches to the end frame. Insert a large hex nut in the slot in the end of the angle brace.
Screw the black knob with post through the end frame into the nut. This will secure the angle brace to the end frame. See Fig 17b & c.

**FIG. 17a**
**FIG. 17b**
**FIG. 17c**

**STEP 2.**
**Place Carriages on Rollers**
Place the lower carriage onto the rollers See Fig 18. The lower carriage has cutouts on both sides to attach an optional stitch length regulator. The metal pin that sticks out of the top of the lower carriage should be closest to the front of the frame. Also the 4-wheeler with the notch cutout (See Fig. 18a) goes to the back of the frame.
Place your upper carriage onto the lower carriage. The metal inserts on the upper carriage are for an optional handle that attaches to the carriage if you do not have a handle on your sewing machine. Place the upper carriage so the metal inserts are on the left side when you are facing the front of the frame.

**FIG. 18**
**FIG. 18a**
ROLLER ASSEMBLY INSTRUCTIONS

STEP 1.
Assembling the Rollers
Set each of the end frames so that the front roller support is in the ‘up’ position holding it in place with the lock pin. Set each of the 3 conduit rollers into the slots in the end frame. All of the ratchet wheels should be on the right hand side of the frame. See Fig 19 for roller locations. Screw a black star knob onto each of the roller end bolts loosely.

During quilting, the pawls will catch the ratchet wheels and prevent them from turning in order to keep tension on your quilt.

STEP 2.
Lock Pins
Two more lock pins are used to hold the front roller in its slot while it is in the down position. They are inserted thru a square hole in the front spacer. Fig 20 shows the lock pin location, the pole is not pictured. Remove the lock pins before attaching the roller to the end frames.
**CENTER SUPPORT ASSEMBLY INSTRUCTIONS**

*Locate bag of hardware labeled “center support hardware”*

**STEP 1.**
Lay the center support upright in the pocket in the Top support w/ round hole. 
*See Fig. 21*

**STEP 2.**
Lay the top support with square hole on top. Insert the carriage bolt through the hole. The square head of the carriage bolt should sit in the square hole in the top support. *See Fig. 21a.* Flip the center support assembly over and secure carriage bolt with 3/8” washer and wingnut. *See Fig. 21b.*

**STEP 3.**
To attach roller brackets, insert barrel nut into the hole on the side of the top support. *See Fig. 21c.*

**STEP 4.**
Insert Allen head bolts through roller bracket. The scoop on the roller bracket is located towards the top of the center support. *See Fig. 21d*

Use two barrel nuts and allen head screws to attach the roller brackets to each end of the top supports.
STEP 5.
Attach the center support to the two carriage rollers using the J-hook bolts.

Secure the J-hook bolts using a 1/4" washer and wing nut.  See Fig. 22

The notched end of the center support should line up with the notches in the template supports on the end frame, towards the back of the frame.
See Fig. 23

Using all 4 J-hook bolts, attach both ends of the center support to both of the carriage track rollers.

STEP 6.
Make sure that all 4 J-hook bolts are tightened securely for stability.

Attach the extender leg.  See end frame assembly instructions for assembly method.

See Fig. 23 for the completed installation of the center support as shown on the Stretch Machine Frame.
STEP 1. Adding the Template Support Boards
The template support boards shipped with your template boards will help support the template. You do not need to cut these down if you decide to make your frame shorter than 10’. These boards are designed to overlap in the middle. See Fig. 24

See template board package for instructions on how to assemble the template boards.

FIG. 24
STEP 1.
Assembling Stylus Fastener
Thread the small black knob into the stylus fastener.
Place the U-shaped metal piece into the stylus fastener as shown in Fig 1.

STEP 2.
Attach Stylus Holder
Slide the stylus fastener (with the u-shaped piece inside) onto the T-support (see fig. 2) and insert the stylus thru the large holes (see fig. 3). Tighten the black knob until the stylus fastener is holding the stylus securely. The metal U-shaped piece protects the side of the wood from the end of the knob.

Parts:

<table>
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<tr>
<td>A Wood T-support</td>
<td>1201</td>
</tr>
<tr>
<td>B Wood gripper</td>
<td>1200</td>
</tr>
<tr>
<td>C Wood stylus holder</td>
<td>1202</td>
</tr>
<tr>
<td>D Black Bar Knob</td>
<td>3116</td>
</tr>
<tr>
<td>E Small black knob</td>
<td>3077</td>
</tr>
<tr>
<td>F Laser Pointer</td>
<td>3078</td>
</tr>
<tr>
<td>G Metal stylus fastener</td>
<td>3079</td>
</tr>
<tr>
<td>H Metal U-shape</td>
<td>3080</td>
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</table>
STEP 3. 
Attach Gripper to Carriage
Insert the stud on the large knob through the gripper and into the threaded hole in the T-support.
You can screw the knob into the hole a few turns and then slide it onto the end of the carriage.  
See Fig 4
One side of the gripper is larger than the other, make sure that you have the gripper oriented the correct way (See figs 5 & 6). If incorrectly assembled it will tilt slightly up on one side.

STEP 4. 
Attach Laser Pointer
Set the laser pointer in the large hole in the end of the stylus holder. You may want to cut off the key ring with a wire cutter. To turn on the laser pointer, push it down so that the button is depressed. When you are done using the laser pointer, raise it back out of the hole so that it turns off again.  See Fig. 7

STEP 5. 
Template Stylus
The end of the stylus has been turned down to fit inside a 1/4” template groove. 
Loosen the small black knob and lower the stylus down into the groove. When not using the template stylus, you can secure it above the height of the template board so that it doesn’t interfere with your laser pointer. 
You can order template boards with pre-cut patterns from our website, or you can create them yourself with a hand-router.
Template Tips:

- You can reverse your Machine Frame handles by removing the hand speed control (if you have one attached) and the knob at the top of the “T” part of the handles. Slide the cross-bar out, reattach your handles on the rear of the frame, reattach your hand speed control and then you are comfortably seated at the rear of the frame.

- Some people find it helpful to add friction to your carriage movement for template quilting. This will slow down your carriage movement and may make it easier to follow patterns. Simply lower your rear roller support until it is rubbing on the base of your machine. You can offset, repeat, and reverse patterns to create new designs.

- Many quilt magazines are including machine quilting patterns. They are easy to photocopy and trace onto your quilt.

- The gripper attaches to both sides of the carriage, slides along the carriage edges, and the stylus fastener slides along the t-support for versatility.

- A good way to start a pattern in an exact spot on your quilt is to put the needle into the fabric at the point that you would like to begin the pattern. Then adjust your stylus location using the gripper and fastener knobs to point to the beginning point in your pattern.

- Our website has more tips on how to use your pointer package and template boards. Please go to:  [www.hinterberg.com/machine_tips.htm](http://www.hinterberg.com/machine_tips.htm)
END TENSIONERS

Attach sticky back Velcro to end frames.
Attach spring clamps to edge of quilt.
Pull edges of quilt tight and secure to end frame using attached Velcro.

Your quilt backing may be much wider than your quilt top. Attach end tensioners to edge of quilt back and use pins to secure edge of top to backing.

If you are quilting a small quilt or wall hanging on a 10’ frame, you may need to purchase some extra Velcro to make your end tensioners longer.
STEP 1.
To set the sewing machine on the frame, you will need to lift the rear roller out of its slot. See Fig. 25
Place your sewing machine on the upper carriage of the frame.

**FIG. 25**

STEP 2.
Slide the roller into the neck area of the sewing machine and replace the rear roller in its slot. See Fig 26
Tighten all the knobs on the frame and get ready to startquilting!

You will need to adjust the height of the rear roller as the finished quilt gets rolled on to this roller. The quilt should just glide across the bed of the machine. The rear roller should be approximately 1/4” off the bed of the machine. See Fig. 27

If you have trouble adjusting the roller height with the height adjuster knobs, you can remove them and just slide the roller supports up and down.

**FIG. 26**

**FIG. 27**
DIRECTIONS FOR MAKING AND ATTACHING LEADERS (APRONS)

Your quilt layers will be basted or pinned to fabric leaders (aprons) that you must attach to the rollers first.

We offer a fabric kit, that you can purchase from us. The fabric kit includes cotton drill, 118” long, cut to the proper measurements and serged. Or you can easily make them yourself.

To make your leaders (aprons), any sturdy fabric may be used. Heavy fabrics such as canvas will be difficult to pin or baste. Do not use stretchy fabrics or knits.

1. You will need three strips of fabric, one each for the front, middle and rear roller. The length of the fabric leader is determined by measuring your roller length and subtracting two inches. (eg. 120” rollers – 2” + 118” leaders). The three leaders will be cut from this length of fabric.

2. For the Stretch Machine Frame, you will cut one length about 24” wide, one 15” wide and one 5” wide.

3. Zigzag or serge the long edges of the fabric to avoid raveling.

4. See next page for more photos and instructions on how to attach the leaders.
DIRECTIONS FOR ATTACHING LEADERS (APRONS)

STEP 1
Standing at the front of your frame, or so that the end of the frame with the ratchet wheels is on your right side. Tape the long edge of the fabric to the rollers using any heavy-duty tape, such as duct tape or cloth mending tape.

The 24” wide apron goes on the front roller. The 15” wide apron goes on the middle roller, and the 5” wide apron goes on the rear roller.

The aprons must be taped on straight. Start by using several small pieces of tape spaced out across the roller. See Fig. 1
You can look down the end of the roller to see if it is straight. See Fig. 3 below.
Then put one long strip of tape across the whole roller. See Fig. 2

The leaders will roll over the top of the roller toward the back of the frame. See Figs. 3 and 4

The leaders will drape off of the rollers, providing an edge to pin your quilt to. See following pages on how to attach the quilt layers.
LOADING YOUR QUILT ONTO THE FRAME

These instructions are written as though you are standing in front of your frame, or so that the end of the frame with the ratchet wheels is on your right hand side. Take your time with this process, as it is critical for satisfactory results.

Step 1.
Remove the lock pins in the middle roller support and raise the front roller, as shown in Fig. 1. Replace the lock pins to hold the roller in this position.

The backing layer is attached first. For best results:
- Trim selvages
- Cut your backing at least 8" longer than the top and at least 4" wider than your top (2" on each side). If possible, the seams in your backing should run parallel to the rollers.
- Mark the center of the backing and the center of the front, middle, and back roller aprons.

Remember when you are placing your quilt on the frame, that you will need an open space of approx. 6-8" on one end of the quilt to access the bobbin area of your machine. We recommend leaving this space on the left end of the frame because your pointer package is usually mounted on the left hand side of the carriage and will not interfere with the end frame on the left side. If you have a very large quilt, this area can be eliminated, but it makes accessing your bobbin difficult.

Step 2.
To begin, spread your backing fabric across the frame with the bottom edge closest to you. Backing fabric is wrong side up. See Fig. 1

Standing at the front of the frame, with the leader hanging, match the center of the backing fabric with the center of the leader on the middle roller.

Remember to readjust your center mark on your fabric if you are leaving a machine access area on one end of the frame. You can do this by moving the center mark on all of your aprons 8" to the right, or by moving the center marks on your backing and top fabric 8" to the left.

Pin the center of the edge of your backing fabric to the edge of the middle roller leader. The leader will roll over the roller and be pulled away from you. Proceeding from the center to the sides of your quilt, pin the edge of the backing fabric to the edge of the leader. A good method is to begin by placing a pin every foot or so, check to see that the fabric is on the frame straight and the edge of the backing fabric is parallel to the rollers. After you have made any necessary adjustments, fill in the rest of the edge with pins every inch or so. See Fig. 2
Step 3.
Gripping the middle roller with your hands, roll all but approximately 18” of the backing fabric onto the middle roller. It may help to have two people to roll this on large quilts. Make sure there are no wrinkles in the backing fabric as you roll, and make sure the fabric is not being stretched as you roll.
Now you will be looking at most of the backing fabric rolled onto the middle roller, and the other edge of the backing fabric hanging down off the roller.
Take this second edge of backing fabric and pin it to the leader on the rear roller, using the same method that you used on the first roller. (See Fig. 3) Place a few pins, make sure that the tension is even all along the length of the roller, and fill in the rest of the pins.
**Note that the leader on the rear roller should roll off of the bottom of the roller and be pulled towards you, while the middle roller leader rolls off the top and is pulled away from you.**
Now your backing fabric is attached to the frame. See Fig. 4

Step 4.
Next you will attach your batting and quilt top.
The batting and quilt top are attached at the same time.
First, spread your batting out across the frame with the edge parallel to the front roller as you did with your backing fabric. See Fig. 5
It is important at this step to make sure your batting does not have any wrinkles or is not being pulled or stretched anywhere.
Step 5.
Lay your quilt top carefully on top of your batting. Spread it out evenly. (See Fig. 6) It helps if your quilt backing and batting are approx. 4" wider than your quilt top. This way, if your quilt top is not perfectly straight, you can easily trim away the extra batting and fabric after you are done quilting and the quilt is off the frame. If you are careful to prevent any wrinkles between the batting and the quilt top during this step, it will make rolling these layers onto the frame much easier.

Step 6.
Following the same procedure as you did with the backing, very carefully pin BOTH the batting and quilt top to the edge of the leader on the front roller at the same time. The front leader rolls over the roller and pulls away from you. See Fig. 7. Again, roll the top and batting onto the front roller, carefully. Stop every few inches and feel for wrinkles in the batting. You can check the underside of the frame to see wrinkles in the batting. Continue rolling until the rear edge of the top and batting are even with the rear roller.

Step 7.
The final step is to pin the rear edge of your quilt top and batting to the rear roller using the same method as before. You have already pinned the backing to that apron, and you will actually be pinning the top and batting to the backing fabric and not the apron. This is critical because if you are sewing near the edge of the quilt top fabric, you will not accidentally sew into the fabric of the leader. See Fig. 8.

Step 8.
Remove lock pins and drop front roller to down position. Replace lock pins.

See next page for tips on beginning to quilt.
Tips for beginning to quilt on your Hinterberg Frame

- Drop your feed dogs or apply tape over them so that they are inoperable.
- Set your stitch length to 0.
- You may need to adjust your presser foot pressure and try different presser feet.
- Always bring your bobbin thread up through the quilt with each start.
- Lock your threads with tiny stitches and finish in this same manner to ensure good results.
- Any necessary height adjustments to the rollers should be made after installing your machine. Your machine should glide smoothly under the quilt, without raising the fabric as it moves from side to side.
- When machine quilting, planning your stitching patterns ahead of time will make the job easier and more rewarding. If this is your first try at machine quilting, start with a small quilt with a simple pattern, or even printed fabric. Take some time to get the feel of the machine movement on the frame. Each machine will have limitations depending on the length of the arm of your machine. Even if you have machine quilted before, the technique is different. Your quilt is stationary and you will be moving your machine. If your machine carriage does not move smoothly and easily, check all adjustments to be sure your frame is correctly assembled. It should roll easily both front to back and left to right.
- Begin quilting on the back edge of the quilt and work toward the front. The leaders on the front and middle rollers should be long enough to allow the top edge of the quilt to advance to the quilting area between the middle and rear rollers.
- Use the ratchets to keep the tension of the top and backing even. If the tension is not even on the backing and the top, when you take your quilt off the frame, you will see puckering of the fabric. You can check this from time to time by loosening up the tension on all the rollers and checking the stitch quality.
- With larger quilts, after you have stitched a large portion of the quilt, you may find that the quilting area is limited and you can no longer quilt in the manner you desire. At this point, baste the remaining part of the quilt. Once the quilt is basted, remove it from the frame, turn the quilt end to end (180 degrees) and remount the basted quilt using only the middle and rear rollers. In this position you can continue quilting from the area you stopped to the remaining end.
- As with any technique, your stitches will become more even with practice.
- Our website has more tips on how to use your Hinterberg frame. Please go to: www.hinterberg.com/tips-machinequilting.aspx

Machine Quilting Frame Disassembly:

1. Unplug power source.
2. Remove the upper handle assembly from the machine carriage.
3. To remove the machine, loosen end knobs on the rear roller. Raise the left end (side without ratchet wheel) of the rear roller enough to guide the machine out from under the roller. Lift out machine. Replace roller into slot.
4. Remove machine carriage.
5. Remove template board.
6. Put front roller into up position. Remove L-shaped lock pins from front roller and loosen knobs.
7. Lift and remove quilt rollers. You can leave the quilt on the rollers if desired.
8. Remove center support brace.
9. Remove angle brace knobs. They can remain attached to the rollers, or use wrench to loosen bolts. Replace the knobs with studs into the angle braces for storage.
10. Remove black knob and rear carriage track.
11. Remove remaining carriage track.
12. Replace all knobs onto roller ends for storage.