XL Quilting Frame
Depending on the size you ordered you will have either
5 Foot sections which will build the 10 Foot frame
or
6 Foot sections which will build the 12 Foot frame
**Box 1 Parts**

A - Complete Right Side  
PH1200-00 each 1

B - Right Gear Box  
PH1601-002 each 1

C - Large Wheel with knob  
PH1401-001 each 3

D - Side Support Plate  
PH1910 each 4

H - Complete Left Side  
PH1100-00

J - Left Gear Box  
PH1701-000

K - Complete Middle Leg  
PH1300-000

L - Back Support Plate  
PH1912-000

P - Front Support Plate  
PH1911-000
Box 2 Parts

Q - Plastic Table
   PH1908-000 each 2
R - Plastic Tracks 5 or 6 foot
   PH1909-006 each 4
S - Plastic Tracks 10 or 12 foot
   PH1909-012 each 4
T - Front Bar
   PH1901 each 2
U - Track Support
   PH1907-000 each 4
V - Frame Table
   PH1906-000 each 2
X - Track Support Coupler
   PH1913-000 each 2

Box 3 Parts

Y - Shaft 1828.8mm
   PH1902-000 each 1
Z - Shaft 950mm
   PH1601-001 each 2
AA - Shaft Coupler
   PH1903 each 2
AB - Fabric Rail with slots
   PH1905-200 each 3
AC - Fabric Rail without slots
   PH1905-100 each 5
AD - Rail Coupler
   PH1904-000 each 4

Box 4 Parts

AE - Complete Top Carriage
   PH1802-000 each 1
AF - Complete Bottom Carriage
   PH1801-001 each 1
AG - Hardware
AH - Tools
AJ - Gearbox bushing
   PH1601-004 each 2
AK - Bevel Gear 1
   PH1601-003 each 2
AL - Take up rail wheel assembly
   PH1400-100
AG - Hardware includes the following pieces.

**M8x16mm Socket Head Screw**
PH1920-001 54 each
Used for assembly of frame and mounting gear box.

**M6x10mm Connector Bolt**
PH1920-003 16 each
Used for securing track support

**M6 x 16 mm Set Screw**
PH1920-004 32 each
Used to connect rails, track support, and shaft

**Washer**
PH1920-008 2 each
Used for gear in gear box

**M10 x 55mm Socket Button Head Screw**
PH1920-009 2 each
Used for gear in gear box

**M10 Jam Nut**
PH1920-019 2 each
Used for gear in gear box

**Other Frame Parts**

**Angled Cap**
PH1120-003

**Bolt Holding Pull**
PH1930-001

**Pull end Anchor Third**
PH1930-002

**Leg end Cap 35 mm**
PH1002-005

**Leveling Foot**
PH1925-000

**Rail holder with Ratchet Pawl**
PH1203-004

**Rail holder without Ratchet Pawl**
PH1103-003

**Ratchet Pawl**
PH1203-050

**Ratchets**
PH1915-000
**Frame Orientation Reference**

This is the back of the frame.
Pantograph can be placed back here for you to follow

This is the Left side of the frame.

This is the front of the frame.

This is the right side of the frame.

Fabric loads from this side of the frame.
This is the front of the frame.

**Height Adjustable Leg Assembly**

*Preset the Leg height for your comfort adjustments can be made once you have the table assembled.*

Parts Used:
1 - Right side Assembly
1 - Left side Assembly
1 - Middle Leg Assembly * (for 10 or 12 foot)

**Step 1:** To adjust the height of the leg, remove the pre-assembled M8 x 50mm bolt with cap nut and loosen the M8 x 16mm Socket Head Screw.

**Step 2:** Using the bungee support as a guide. Adjust the Assemblies so that the bungee support is close to your waist height. This is where the base of the machine will be once you have everything assembled.

**Step 3:** Reinsert the M8 x 50mm bolt with cap nut into the leg at desired height. Then tighten the M8 x 16mm Socket Head Screw.

**Step 4:** Repeat steps 1 - 3 for all the other legs. Ensuring the assemblies are all the same height.
Frame Table Top to Side assembly

Parts Used:
- 16 - M8 x 16mm Socket Head Screw
- 1 - Right Side Assembly
- 1 - Left Side Assembly
- 2 - Frame Table * (1 Frame Table for 5 or 6 foot)
- 4 - Side Support Plate

Assembly Right side assembly to frame table

Step 1: With your Right Side Assembly and (1) Frame Table, Slide the Frame Table in the brackets. Then use (2) M8 x 16mm Socket Head Screws to connect the Right Side Assembly to the Frame Table. Do not tighten these screws until step 3. Make sure the side of the Frame Table with the holes are towards the back. See fig 2.

Step 2: Using 4 M8 x 16mm Socket Head Screws and one Side Support Plate. Attach to the corner of the frame table and the right side assembly. Ensure that the Side Support Plate is square with the right side assembly and the frame table. Tighten the screws to the frame table and the right side assembly keeping the side support plate square with the side assembly and the frame table. See fig 4.

Step 3: Now tighten the two screws holding the Frame Table to the right side assembly. See fig 4.
Assembly Left side assembly to frame table

**Step 4:** With your Left Side Assembly and (1) Frame Table, Slide the Frame Table in the brackets. Then use (2) M8 x 16mm Socket Head Screws to connect the Left Side Assembly to the Frame Table. Do not tighten these screws until step 6. Make sure the side of the Frame Table with the holes are towards the back. See fig 2

**Step 5:** Using 4 M8 x 16mm Socket Head Screws and one Side Support Plate. Attach to the corner of the frame table and the left side assembly. Ensure that the Side Support Plate is square with the right side assembly and the frame table. Tighten the screws to the frame table and the left side assembly keeping the side support plate square with the side assembly and the frame table. See fig 6

**Step 6:** Now tighten the two screws holding the Frame Table to the right side assembly. See fig 7
**Attach Middle Leg**  
(for 10 or 12 foot frame)

Parts used:
- 4 - M8 x 16mm Socket Head Screw
- 1 - Right Side Assembly with Frame Table
- 1 - Left Side Assembly with Frame Table
- 1 - Middle leg
- 1 - Back Support Plate

**Step 1:** Attach Right side assembly, with frame table, attached to the middle leg using (2) M8 x 16mm Socket Head Screws, located at the bottom of the middle leg support, Don’t tighten these screws at this time. Wait for step 8.  See fig 8

**Step 2:** Attach the Left side assembly, with frame table, attached to the middle leg using (2) M8 x 16mm Socket Head Screws, located at the bottom of the middle leg support, Don’t tighten these screws at this time. Wait for step 8.

**Step 3:** Use (4) M8 x 16mm Socket Head Screws and the Back Support Plate, Attach where the Frame Tables meet with the Middle leg. Do not tighten at this time. Wait for step 9  See fig 10 and 11

**Step 4.** Check the Back Support Plate for being square on the middle leg. Use the two (2) M8 x 16mm Socket Head Screws to tighten the Back Support Plate to the middle leg. see fig 11

**Step 5:** With the Frame Tables and Back Support Plate in place on the Middle Leg lift all the parts together about 3 to 4 inches off the floor.  See fig 12

**Step 6:** Gently place the Frame Tables and Middle leg back on the floor squeezing them back together. Check that the two (2) Frame Tables are very close together, must be touching. Also check to ensure that they are flush with each other and that one is not higher than the other.  See fig 13 a shows wrong way fig 13 b shows right way.
Step 7: Repeat step 5 if they are not flush and touching. Very important. This helps to ensure they are level and that your track will lay flat across them.

Step 8: Tighten (4) M8 x 16mm Socket Head Screws, Located on the middle leg assembly, holding the Middle Assembly to the Frame Tables. This must be done before step 9.

Step 9: Square (90 degrees) the middle leg with the frame tables. Now tighten all (6) M8 x 16mm Socket Head Screws for the Back Support Plate.

Connecting the Front Bars
For 10 or 12 foot frame

Parts used:
16 - M8 x 16mm Socket Head Screw
2 - Front Bar
2 - Side Support Plate
1 - Front Support Plate

Step 1: At the front of the frame place one front bar to the right side assembly bracket and on top of the middle leg. See fig 16. Make sure slotted holes are on top and the threaded holes are facing front. See fig 17.

Step 2: Attach font bar with (1) M8 x 16mm Socket Head Screw to the bottom of the right side assembly and (1) M8 x 16mm Socket Head Screw to the bottom of the middle leg. See fig 20.

Step 3: Repeat steps 1 and 2 for placing bar to the left side assembly and middle leg.

Step 4: Attach the side support plate to the right side assembly and front bar using (4) M8 x 16mm Socket Head Screw. Ensure the front bar and right side assembly are square. Tighten all screws.

Step 5: Repeat Step 4 for the left side.

Step 6: Attach the Front Support Plate to the front bars.
using the four (4) M8 x 16mm Socket Head Screws see fig 20 before tightening screws, Ensure that your Front Bars are level and square with the front Support Plate then tighten into place.

**Step 6:** Check all screws are tight.

### Gearbox and Shaft Assembly

**Parts Used:**

1. Shaft 1828.8mm*
2. Shaft Coupler*
2. Shaft 950mm
2. Bevel Gear 1
2. Gear box bushing
2. M10 x 55mm Sock Button Head Screw
2. M10 Jam nut
2. Washer 11mm ID x 28mm OD
1. Right Gearbox
1. Left Gearbox
4. M8 x 16mm Hex Bolts
2. Large wheel with wheel knob

*(The Shaft and (1) Shaft Coupler are not used in the 5 or 6 foot frame.)*

**Step 1:** Collect the following parts.

1. Shaft 950mm
1. Bevel Gear 1
1. M10 x 55mm Socket button head screw
1. M10 Jam nut
1. Washer

**Step 2:** Feed the M10 x 55mm socket button head screw into the center of the Bevel Gear 1. Screw head with washer needs to be on the narrow side, Thread the 10mm jam nut onto the M10 screw, only thread until the nut is flush with the bottom of the screw. See fig 21 and 22

**Step 3:** While holding the Bevel Gear 1 in your hand slide the Shaft 950mm into the Bevel Gear 1 side with the nut which is attached to the screw. Make sure it’s all the way down. See fig 23
Step 4: With the Shaft and Bevel Gear 1 together tighten the M10 x 55mm Socket Button Head Screw. Do not over tighten as you will remove once installed on the frame to add the Large wheel with wheel knob.

Step 5: Repeat steps 1 - 4 to complete the other Bevel Gear 1 and Shaft.

Step 6: Locate the Shaft 1828.8mm and the (2) Shaft Couplers.

Step 7: Slide (2) Shaft Couplers halfway (first 2 screws) into each end of the Shaft. Position each shaft Coupler close to the edge of the screw hole opening and tighten in place with the set screws found in the Shaft Coupler. See fig 24

Step 8: Insert the Shaft 1828.8mm with the two Shaft Couplers into opening located on the middle leg assembly. Feed the Shaft in from the left side to prevent damage to the Shaft Bushing. See fig 25

Step 9: Slide (1) Bevel Gear 1 with Shaft 950mm onto the Shaft Coupler attached to the Shaft 1828.8mm on the right side.

Step 10: Using the Right Gear Box position under the take up roller riser. See fig 26 Place the (1) Gearbox Bushing on the Screw Head side of the Bevel Gear 1, see fig 27, and slide into position on the Gearbox so that the Screw head is on the outside of the frame.

Step 11: Use (2) M8 x 16mm socket head screw to attach the Right Gearbox to the frame. This should be flush with the top edge of the right leg assembly. See fig 28 and 29

Step 12: Repeat step 9 - 11 using the Left Gearbox and the remaining Bevel Gear 1 with Shaft 950mm.

Step 13: With both Gearboxes attached adjust Shafts so that all are connected and screw holes align tighten the set screws so that both sides turn together and the take up rail riser adjust together. See fig 30
Step 16: Remove the M10 x 55mm Socket Button Head Screw and attach the Large Wheel with Knobs onto each Gearbox using the M10 x 66mm Socket Button Head Screw removed earlier. See fig 31 and 32.
**Track Support Assembly***
(For 10 or 12 foot frame only)

Parts used:
- 8 - M6 x 16mm Set Screw
- 4 - Track Support
- 2 - Track Support Coupler

**Step 1:** Slide a Track Support Coupler halfway into a Track Support and lock the Coupler in place by using (2) M6 x 16mm Set Screws. Make sure to use the end screw holes.

**Step 2:** Slide another Track Support over the rest of the Track Support Coupler and then lock the Coupler in place by using (2) M6 x 16mm Set Screws. See fig 33

**Step 3:** Repeat Steps 1 and 2 to create another Track Support Assembly.

**Track Insertion**

Parts Used:
- 2 - Track Support Assembly
- 4 - Plastic Track* (for 10 or 12 foot)
- 4 - Plastic Track* (for 5 or 6 foot)

**Step 1:** Slide (2) Plastic track into the grooves of the Track Support Assembly

**Step 2:** Repeat Step 1 for remaining Track Support Assembly
Track Installation

Parts Used:

2 - Track Support Assembly
16 - M6 x 10mm Connector Bolt*

*(only 8 Connector Bolts for 5 or 6 foot frame)

Step 1: Lay (1) of the Track Support Assembly on the front Bar.

Step 2: Screw (8) M6 x 10mm Connector Bolt into each of the holes found under the Front Bar. Holes should match up with track support holes. Do not completely tighten the bolts at this time. Wait for the proper step found in the Track Alignment section.

Step 3: Lay (1) track support assembly on the back side of the Frame Table.

Step 4: Screw (8) M6x10mm connector bolts into each of the holes found under the frame table. Holes should match up with track support holes.

Step 5: Ensure the back of the track support assembly and the back of the Frame Table are flush with each other. See fig 34  Now tighten all (8) M6x10mm connector bolts screws completely.

Track Alignment

Parts used:

1 - Bottom Carriage

Step 1: Place the Bottom Carriage on the tracks. Slide carriage across the frame to the 1st screw hole on the front bar. Tighten that screw completely.

Step 2: Slide the Carriage across the frame to the next screw hole to position the front track support assembly. Then tighten that screw completely.
Step 3: Repeat these steps 1 and 2 for the remaining screws to secure the track support in the proper position on the front bar.

Step 4: Now that all screws are tight. Slide the bottom carriage from one side of the frame to the other, watching the wheels as you go, make sure the wheels are staying on the track.

Note: If at any point the wheels come off the track repeat steps 1 and 2.

**Front Rail Support Adjustment**
(only for 26” Quilting Machine)
The front rail supports are set up for the TinLizzie18 Machine. If you have the Ansley26 machine adjustments will need to be done.

Step 1: Remove the (4) bolt holding the rail support assembly in place.

Step 2: Slide the rail support assembly to the front set of holes.

Step 3: Replace the (4) bolts.

Step 4: Repeat for other side of frame.

**Bungee Adjustment**
(only for 26” Quilting Machine)

Step 1: For a 26” Quilting Machine unscrew the (4) M8 x 16mm Socket Head Screws holding the (2) Bungee Tubes in place.

Step 2: Move both Bungee Tubes closer to the front of the frame and reattach the (4) M8 x 16mm Socket Head Screws as shown. See fig 39.
**Plastic Table Installation**

Parts Used:

- 2 - Table *

  * (Only (1) Plastic Table is needed for the 5 or 6 foot frame)

**Step 1:** Lay the Plastic Table against the back Track Support and against one side of the frame, over the foam strips.

**Step 2:** Lay the other Table against the back Track Support and against the other side of the frame.

**Ratchet Wheels and Rail Ends**

Parts Used:

- 3 - Foot section Fabric Rail Assembly with two slots
- 3 - Ratchet wheels
- 1 - Take up wheel with handle
- 1 - Take up rail wheel assembly

**Step 1:** Using the Fabric rail without a bolt in the end with slots. Slide the ratchet wheel over the end of the fabric rail lining up the two openings in the fabric rail with the keys on the inside of the ratchet wheel.

**Step 2:** For this fabric rail we will use the Take up wheel.
Step 3: Locate the Take up rail wheel assembly.

Fig 44 shows all the parts for the hand wheel assembly.

Step 4: Remove all parts from the Take up rail wheel assembly. The bolt is reverse threads so left is going to be tighten and right will be loosen.

Step 5: Locate the hand wheel

Step 6: Using the bolt with a washer feed the bolt threw the middle of the hand wheel.

Step 7: Now replace the hand wheel adapter into the hand wheel engaging the hand wheel with the bolt.

Step 8: Place the spacer, washer, wedges, cone with nut back on the bolt.

Step 9: Carefully place this in the fabric rail which you have placed the ratchet wheel on. Tighten into place.

For the other two rails with slots use the following steps:

Step 10: Carefully remove the bolts from the end of the fabric rail with the slot for installation of the ratchet wheel.

Step 10a. Begin by loosening the bolt.

Step 10b. Lightly tap the bolt to release the tension on the wedges.

Step 10c. Continue to loosen and tap until you can easily remove the bolt with the wedges.

Step 11: Install the ratchet wheel by lining up the wheel with the fabric rail and the keys with the slots.

Step 12: Make the ratchet wheel flush with the fabric rail.

Step 13: Insert the bolt with the wedges and tighten into place.
Rail Connection *
(For 10 or 12 Foot Frame only)

Parts Used:
1 - Fabric Rail Assembly with Hand Wheel
5 - Fabric Rail Assembly without Ratchet
2 - Fabric Rail Assembly with Ratchet
4 - Rail Coupler
16 - M8 x 16mm Set Screw

**Step 1:** Slide a Rail Coupler halfway into the open end of a Fabric Rail Assembly with a Ratchet and line the holes up. Use (2) M6 x 16mm Set Screw to tighten the Rail to the Coupler.

**Step 2:** Slide a Fabric Rail Assembly without a Ratchet on the other end of the coupler. Again line up the holes and tighten (2) M6 x 16mm Set Screw into the coupler through the rail.

**Step 3:** Repeat Steps 1 and 2 until you have three Fabric Rail Assemblies and then make the fourth assembly using (2) Fabric Rail Assemblies without Ratchets for the batting rail.
Rail Installation

Parts Used:
- 1 - Fabric Rail Assembly without Ratchet
- 2 - Fabric Rail Assembly with Ratchet
- 1 - Fabric Rail Assembly with Hand Wheel

Note: For all steps press rails into place hard enough to ensure that the Fabric Rails lock into the rail supports.

Step 1: Place the Fabric Rail without Ratchet into the rail holders on each side, on the bottom of the frame for the batting rail.

Step 2: The (2) Fabric Rail Assembly with Ratchet go on the rail holders on the front of the frame with the ratchets going on the right side of the frame.

Step 3: The Fabric Rail Assembly with Hand Wheel goes in the rail holders on the top Middle of the frame with the hand wheel on the right side of the frame.

Step 4: Spin the Rails to make sure the ratchets are working.

Top Carriage Alignment

Parts Used:
- 1 - Top Carriage
- 1 - Bottom Carriage

Step 1: Place the Top Carriage on the Bottom Carriage, check that all 8 wheels are riding on the tracks of the bottom carriage. (If they are go to Machine Attachment) If any wheels are not riding on the tracks proceed to step 2

Step 2: Loosen the 8 screws on the crossbars holding the top carriage together. See fig 58

Step 3: Place Machine head on the carriage to create the proper weight.

Step 4: Line up the wheels so all (8) wheels are touching the track as it slides. Note: Very important that all
wheels are making contact with the track.

**Step 5:** Re-tighten all (8) M8 x 16mm Socket Head Screws.

---

**Machine Attachment**

Parts Used:
- 1 - Top Carriage
- 1 - Tin Lizzie Quilting Machine

**Step 1:** Loosen the M8 x 16mm Socket Head Screws on the Top Carriage, and center your machine side to side over the Top Carriage. Set the machine down on the Top Carriage.

**Step 2:** For the 26 inch machine move Top Carriage to the back of the Bottom Carriage and adjust the machine so the needle is about 1/4 inch in front of the Take Up Rail. For the 18 inch machine make sure the machine is centered so the needle can be in any point between the Rails.

**Step 3:** Re-tighten the M8 x 16mm Socket Head Screws on the Top Carriage

**Congratulations!** You have completed the assembly of your Phoenix XL Quilting Frame.

All that remains is to install your fabric leaders, quilt layers and begin quilting!

We recommend you begin with practice material allowing you to experiment with machine settings and stitching techniques.

**Note:** As you cut the fabric layers, we recommend making the quilt backing about 6 - 8” longer and 2 - 4” wider than the top. This will allow for quilting to the edge of your top if desired and leave room to square up the quilt sandwich without cutting your quilt top.
**Fabric Installation**

Using leader cloths enable you to finish your quilt completely, end to end, without having to take your quilt off the frame.

**Fabric Installation Overview**

**Step 1:** Install quilt top to 2nd rail and roll up.
**Step 2:** Install quilt backing to the 3rd rail and roll up.
**Step 3:** Install batting to the 4th rail and roll up.
**Step 4:** Attach quilt backing to take up rail.
**Step 5:** Attach batting to take up rail.
**Step 6:** Attach quilt top to take up rail.

**Leader Cloth Installation Instructions**

**Step 1:** Make sure your rails are clean. We will be attaching adhesive back Velcro to three of the rails.

**Step 2:** Mark the center of each cloth leader on both edges (Length-wise). We will be placing the leaders where the rails meet in the middle.

**Step 3:** Attach the sticky back Velcro to each fabric rail. There are only three (3) rolls of this. The upper three rails are the only rails to get leaders. Start by finding the middle of the strip of Velcro, Line that mark with the center joint of the rail. Start in the middle and work
your way down both sides.

**Caution:** The Velcro can give you a really bad burn if you run your hand down it. Position the Velcro straight on the Fabric Rail, using gloves, piece of fabric or the leader press firmly on the Velcro to secure to the Fabric Rail.

**Step 4:** Once you have the Velcro in place on each of the Fabric Rails you are ready to attach the leaders. Find the center of the leader, line it up with the center of the Velcro/Fabric Rail. Work your way down both sides to attach the leaders to the Fabric Rails.

**Installing Fabric Layers Onto Rails**

**Quilt Back To 3rd Rail**

**Step 1:** Determine which will be the top and bottom edges of your quilt. Locate the center of the piece.

**Step 2:** Using the center of the bottom edge of the backing and the center of the leader on the 3rd Rail match up the two pieces.

**Step 3:** Pin this to the leader. Ensure that you are pinning the backing on so that the finished side is towards the floor.

**Step 4:** Roll your leader and backing onto the 3rd rail completely. Watch to make sure that the fabric stays lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out. However, be very careful not to stretch or pull the fabric excessively.

**Note:** It is important that you roll the rail the proper direction so the fabric rolls over and onto the 3rd rail.

**Quilt Top to 2nd Rail**

**Step 1:** Determine the top and bottom of your quilt top. Also find the center.
Step 2: Using the center of your quilt top match it to the center of the leader for the 2nd rail. Pin the bottom edge to the leader.

Step 3: Do not stretch or pull the fabric let it lay as naturally as possible.

Step 4: Roll your leader and top onto the 2nd rail completely. Again be sure the fabric stays lined up. Smooth out any wrinkles as you roll by brushing the fabric from the center out, being very careful not to stretch or pull the fabric excessively.

Note: It is important that you roll the rail the proper direction so the fabric rolls onto the 2nd rail the right way. When the fabric rolls off the rail toward the take-up rail, it should roll under and off the rail.

Batting

Step 1: A light, bonded batting is recommended.

Step 2: Center the batting on the 4th rail. Roll the batting onto the 4th rail, being sure to roll the proper direction so that it, like the quilt top, comes off the rail from the bottom when unrolling.

**Attaching Your Quilt Layers to the Take-Up Rail.**

Step 1: Take the edge of the quilt backing and find the center. Match the center of the backing and the center of the Take-Up Rail leader. Pin it along the straight line of the Take-Up Rail leader in a smooth manner, without stretching your fabric.

Step 2: Bring your batting up in between the 3rd rail and 2nd rail, drape over the backing. Lay it along the pin line of your backing on the Take-Up Rail cloth leader.

Step 3: Bring the quilt top up over the backing and batting, Laying it over the batting along the pin line on
the Take-Up Rail cloth leader. Pin your top and batting along the same line as your backing so that it is smooth.

**Rolling your Fabric**

When you have completed your work area and are ready to move to the next, simply release the ratchet stops on the 2nd and 3rd rails, allowing them to roll freely. Roll the 1st rail forward, rolling the completed work area onto that rail.

**Tip!** As you roll forward, the quilt will accumulate on the 1st rail. Be sure to raise the Take-Up Rail brackets slightly as needed, so that the bottom of the rolled up fabric stays about 1/8” above the throat plate of your sewing machine base. Failing to do so will cause your carriage assembly to roll less smoothly.