

HQ

Electromagnetic Channel Locks



Designed by a Quilter, for Quilters.®

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Overview

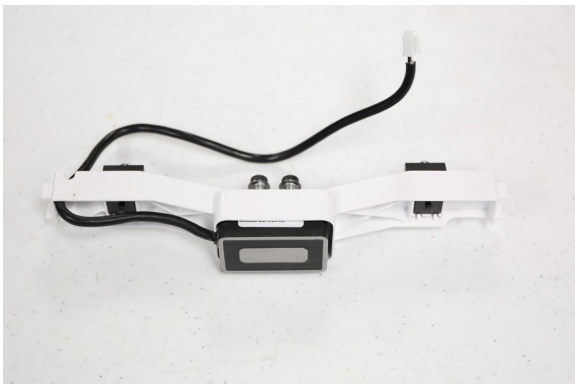
The HQ Electromagnetic Channel Locks attach to the quilting machine base, carriage and frame. They constrain the machine to quilt a straight horizontal line or a straight vertical line. This is useful when basting down the quilt edges, quilting a plumb line for aligning the quilt top, stitching in the ditch, quilting piano keys, crosshatching, and more.

This kit is compatible with most Handi Quilter stand-up machines, from 2007 or later (HQ Fusion®, HQ Avanté®, HQ Simply Sixteen™ (with the HQ Little Foot Frame), and HQ Sixteen® stand-up with 8-wheel track). It is not compatible with the older HQ Sixteen® carriages with the white track. Read all instructions carefully before beginning installation.

HQ Electromagnetic Channel Locks Kit Contents

Kit for HQ Sixteen, HQ Simply Sixteen, or HQ Avanté: part number HG00701

Kit for HQ Fusion: part number HG00703

Item	Quantity	Photo
1. Carriage Frame System X-axis	1	

2. Carriage Frame System Y-axis 1



3. Zip Tie 1



4. Wire Guide and ¼-inch Screw and Washer 1 each



5. Switch Box 1



6. Machine Steel Plate 1



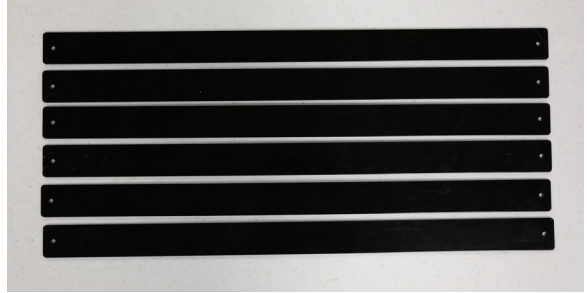
7. Self-Tapping Screws
small: size 10
large: size 12 (bagged separately)

2 each of
2 sizes



8. Frame Steel Plates

6



9. Power Supply Extension Cord

1



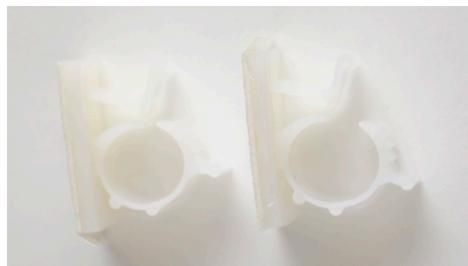
10. Power Supply

1



11. Cable Clips

2



12. Cable Twist Lock

1



13. Velcro Strips

2



14. Plastic Shims (Use only if necessary to adjust magnet height; see *Troubleshooting* at the end of this manual for more information.)

2



15. Instruction Sheet

1

not pictured

Tools Required

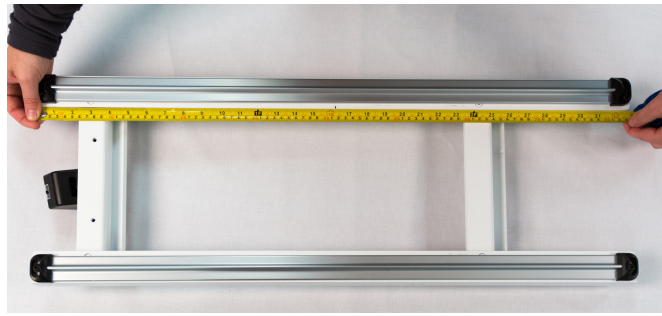
- 2.5mm hex tool (provided)
- 4mm hex tool (provided)
- Tape Measure
- Flat Screwdriver

Installation

To install the channel locks on the carriage

1. Unplug the machine's ribbon cable from the carriage encoder. Then carefully lift the machine off the carriage and set the machine aside.

2. Measure the length of the carriage. Mark the center point. (See the picture to ensure you mark the correct side of the carriage.)




3. Locate Carriage Frame System X-axis. Loosen the two screws with the 2.5 mm hex tool so that the clamps can slide onto the long carriage rails.



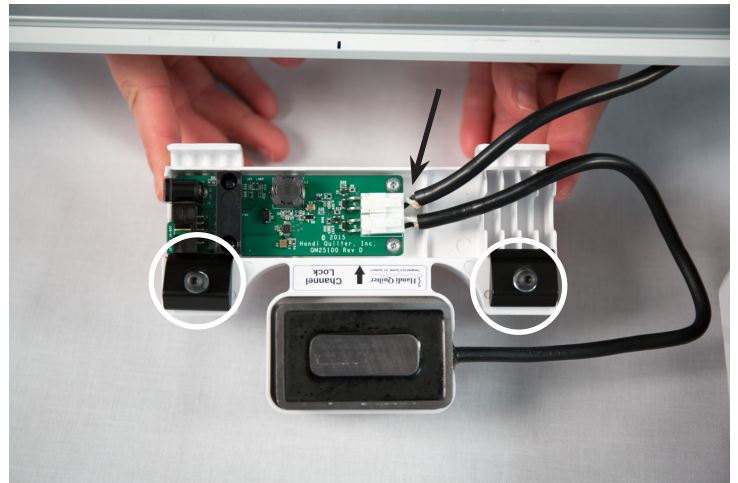
4. With clamps still attached, slide the Carriage Frame System X-axis underneath the carriage and against the crossbar farthest from encoder.



5. Ensure that the clamps are on top of the white rails. Then tighten the two screws with the 2.5 mm hex tool.

 **NOTE:** It may be helpful to use something to prop up both ends of the carriage to ensure that the encoder is not damaged.

6. Locate the Carriage Frame System Y-axis. Loosen the two screws (circled at the right) with 2.5mm hex tool. Plug in the cable from the Carriage Frame System X-axis into the receptacle on the circuit board (see arrow at the right).



7. Use the zip tie to join the two cables together., and trim off the excess of the zip tie. With the clamps still attached to the Carriage Frame System Y-axis, slide it underneath the carriage. Ensure the clamps are on top of the white rails. (See the next picture.)



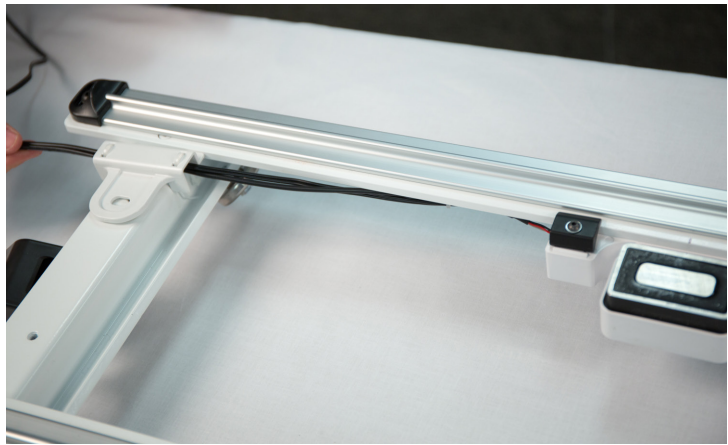
8. Align the arrow with the center measurement mark you made it step 2. Tighten the two screws with 2.5mm hex tool.



9. Plug the Power Supply Cable and Switch Box Cable into the Carriage Frame System Y-axis.



10. Run the Power Supply Extension Cord and Switch Cables over the cross bar with the encoder. Install Wire Guide using the ¼-inch screw and washer.



11. Ensure that the wires run inside the wire-guide channels and that the two tabs are under the long carriage rail.



12. Tighten the screw and washer for the Wire Guide with the 4mm hex tool. Remove any slack in the cable from the Carriage Frame System Y-axis to the Wire Guide, being careful not to pull out the cables. Tighten the zip ties around the wires and trim excess material from the zip ties.

13. Locate the Machine Steel Plate. Carefully lay the machine onto its left side (i.e. the non-thread path side of machine).

14. Align the Machine Steel Plate with the machine baseplates. Use the smaller (size 10) self-tapping screws to attach the Machine Steel Plate to base of machine.

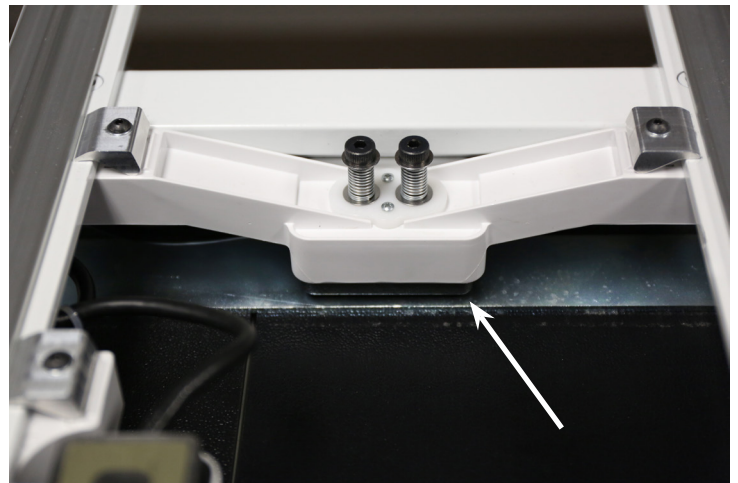
15. Place the carriage back onto frame, aligning the wheels with the track.




16. **HQ Studio Frame:** Move the carriage to one side of frame. Slide one of the Frame Steel Plates under the carriage toward the frame's sidearms.

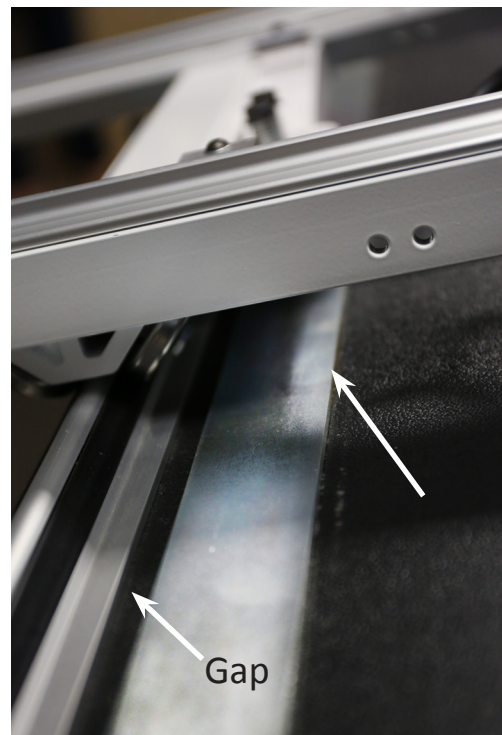
HQ Little Foot Frame: Move the carriage to one side of the Frame. Align one of the Frame Steel Plates with the midpoint, or center, of the Little Foot Frame table surface.

17. Center the Frame Steel Plate under the Carriage Frame System X-axis magnet.



The top photo shows the steel plate when facing the carriage. The bottom photo shows the steel plate centered below the Carriage Frame System X-axis from the side.

 **NOTE:** Note that the Frame Steel Plate is not placed against the tracks, but there is a gap. This gap is necessary to align the Frame Steel Plate under the X-axis magnet as shown in the previous photo.



18. Position the remaining Frame Steel Plates along the full length of the frame. Ensure the Frame Steel Plates span the full length of the frame and that they align with the Carriage Frame System X-axis magnet. (For the HQ Little Foot Frame you'll use two Frame Steel Plates; for the HQ Studio Frame you'll use up to six Frame Steel Plates depending on the length of the frame.)
19. Remove the release paper from the bottom of the Frame Steel Plates and carefully adhere to the table top.
20. Carefully place the quilting machine back onto carriage. Plug the ribbon cable into the carriage encoder.
21. Bring the HQ Electromagnetic Channel Locks' switch to the front of the machine. Peel back the release paper from the loop side of the two Velcro pieces. Attach the loop side of the Velcro to the Switch Box. Decide where you would like the Switch Box to sit on machine the machine, and attach hook side of Velcro.



22. Install the Cable Clips and Cable Twist Lock as needed. The Cable Clips enable you to manage the cable to the switch box so it stays out of the way of the machine while quilting. The Cable Twist enables you to manage any slack in the cables. Plug the Power Supply Extension Cord into the Power Supply. Then plug the Power Supply into a power outlet.

Using the HQ Electromagnetic Channel Locks

The HQ Electromagnetic Channel Locks have three operating modes: horizontal on, vertical on, and off. When set to *horizontal on*, the machine moves in a horizontal direction (left to right and right to left) only. When set to *vertical on*, the machine moves in a vertical direction (front to back and back to front) only. When set to *off*, the machine moves in any direction.

To set the channel locks to stitch vertically

- Press the switch on the switch box toward the I symbol. When the channel locks are engaged, the machine moves only front to back and back to front.



To set the channel locks to stitch horizontally

- Press the switch on the switch box toward the **||** symbol. When the channel locks are engaged, the machine moves only left to right and right to left.



To turn off the channel locks

- Return the switch to the middle **O** position. Free-motion quilt as you normally would.



Troubleshooting

Carriage Frame System X-axis magnet does not engage with the Frame Steel Plates: You may need to use the provided plastic shims to adjust the magnet height. Contact your local Handi Quilter authorized retailer or Handi Quilter technical solutions, Monday through Friday, 8:00 AM through 5:00 PM mountain time.

Size 10 self-tapping screws don't adequately secure the Machine Steel Plate: It's possible that the holes on the carriage were unintentionally stripped during installation such that the size 10 screws are too small. Use the larger size 12 self-tapping screws (bagged separately) instead. If this is still a problem, contact your local Handi Quilter authorized retailer or Handi Quilter technical solutions, Monday through Friday, 8:00 AM through 5:00 PM mountain time.



Handi Quilter®

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Handi Quilter, Inc.
501 N 400 W
North Salt Lake, UT 84054

1-877-MY-QUILT (697-8458)

www.HandiQuilter.com

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