

# HiG3 Automated Centrifuge

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## Unpacking and Setup Guide



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# HiG3 Unpacking and Setup Guide

For HiG3 Automated Centrifuge – 14-04841



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## Tools Required

- Metric Allen Wrench Set
- No. 2 Phillips Screwdriver
- 10mm Open End Wrench

## General Warnings

The icons on this page are used throughout the manual. They appear when information presented requires special attention. Please pay close attention to the instructions that accompany these Warnings and Cautions. Always follow the standard laboratory practices set forth by your facility and local regulatory agencies.

Always use the HiG3 Centrifuge as intended. Improper use of the system and/or its accessories may result in serious injury, damage to the system, and inaccurate results. Additionally, misuse could nullify the warranty



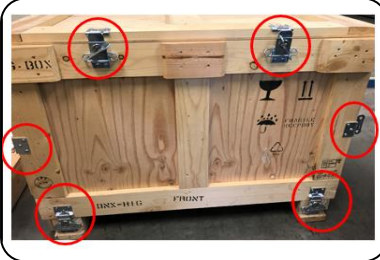
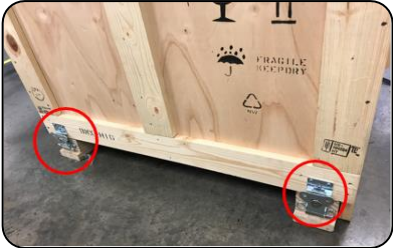
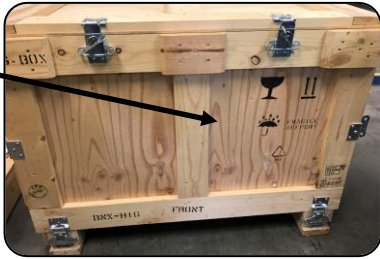

**Warning:** Identifies conditions or practices that could result in personal injury or loss of life




**Pinch Hazard:** Pinch hazard exists when the instrument is operating

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## Opening the Crate

Step	Picture/Description
<p>1. Unclasp the <b>8x Twist Locks</b>. (6 in the front and 2 in the rear).</p>	<div data-bbox="686 346 1063 604">  </div> <div data-bbox="1084 352 1474 598">  </div> <p>Unfold handle and turn counterclockwise, then pull the clasp up and out.</p>
<p>2. Remove the <b>front cover</b>.</p>	<div data-bbox="701 800 1078 1056">  </div> <div data-bbox="1177 789 1446 1056">  </div>
<p>3. Pull the remainder of the crate away.</p>	<p>N/A</p>

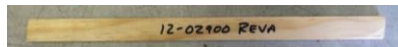
## Unpacking the HiG3 Centrifuge

Step	Picture/Description
1. Remove the <b>accessory box</b> by unstrapping the Velcro.	


2. Ensure the following accessories are in the box:

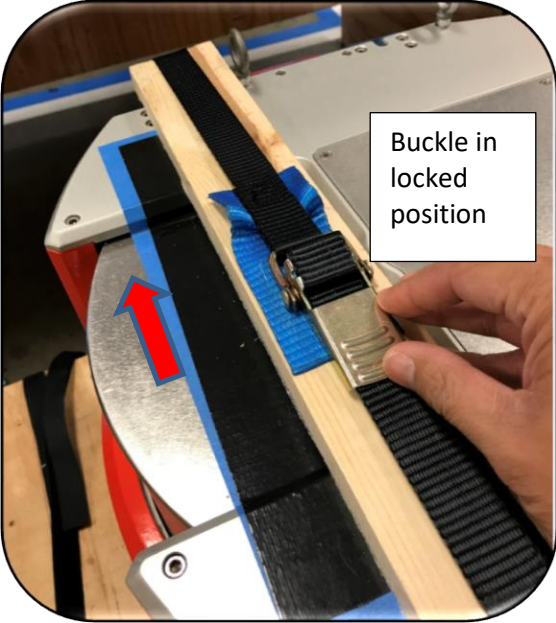

Quantity	Part Description	Part Number	Image
1	USB Cable with Ferrite	12-02901	
1	<b>E-STOP</b> Button, labeled <b>PASSED QC</b>	11-00929	
1	Region appropriate <b>Power Cable</b>	11-00286 12-02235 11-00934 12-02234	US EU Switzerland Italy

Quantity	Part Description	Part Number	Image
2	Lower Side Fan Covers	11-00843	
2	Side Stops	12-01898	
4	M6 x 35 SHCS Screws, taped	99-00088	
9	M4 x 6 Phillips Flat Head	99-00994	
5	M4 x 12 Phillips Flat Head	99-00997	
9	M5 x 16 SHCS with Loctite	12-02271	
4	M6 x 25 SHCS Screws	99-00086	
4	Thick Black Washer	12-01880	

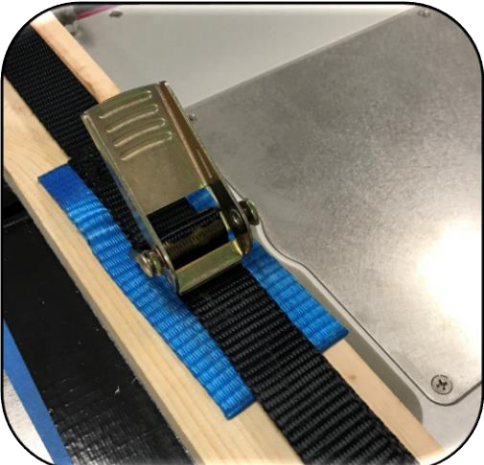

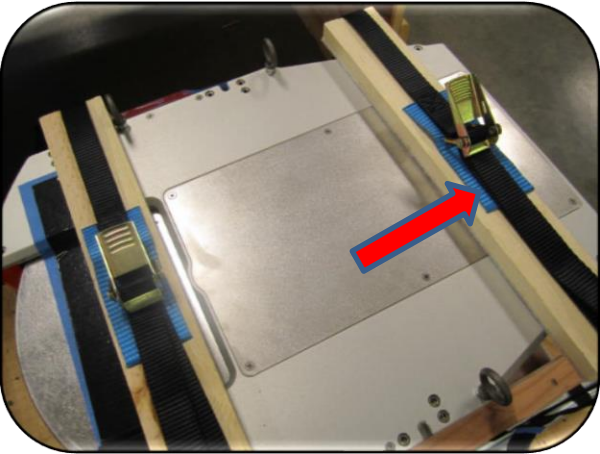
Quantity	Part Description	Part Number	Image
1	Bucket Brace	12-02900	
1	HiG3 Unpacking and Setup Guide (this document)	LIT-50050	N/A
1	CE Declaration of Conformity, HiG	LIT-50049	N/A
1	HiG3 USB drive, Containing HiG Integration Software and HiG3 Operators Manual	18-13757	N/A


Contact [support@bionexsolutions.com](mailto:support@bionexsolutions.com) for any missing accessories.

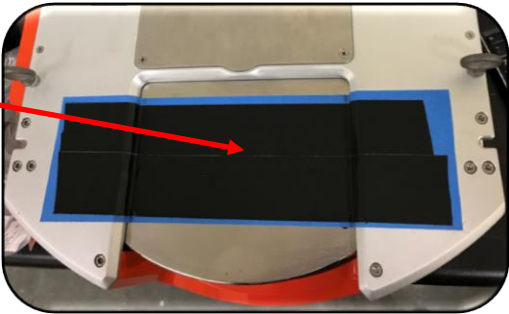
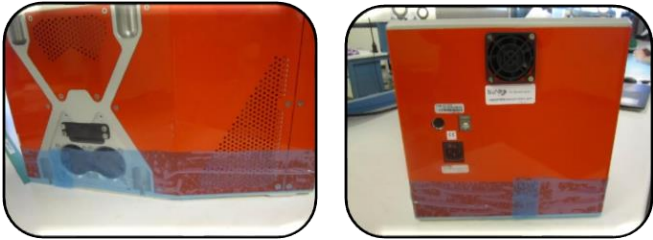

Step	Picture/Description
3. Please do not discard the crate or any of the shipping hardware.	N/A
<p>4. Remove the <b>plastic sheet covering – 24" x 36"</b> (P/N: 12-02933) covering the HiG3.</p> <p>Please do not discard this plastic sheet.</p>	



Step	Picture/Description
<p>5. Flip both strap buckles in the direction of the <b>red arrow</b>. Expect some resistance from the buckles.</p> <p>Flipping the buckle.</p> <p>The unbuckled straps should look like the buckle in the image to the right.</p> <p><b>DO NOT</b> unthread the strap from the buckles. Leave threaded in case the unit needs to be re-packed.</p> <p>The straps should now be loose enough to slide off the wooden blocks.</p>	 




Step	Picture/Description
5. Continued	
6. Carefully slide the <b>front strap</b> off the wooden block and the front of the HiG3 – in the direction of the <b>red arrow</b> and rest the strap on the crate base.	
7. Slide the rear strap in the direction of the <b>red arrow</b> and rest it on the crate.	
8. Remove both wooden blocks.  Please do not discard these wooden blocks.	N/A

Step	Picture/Description
<p>9. Remove the <b>lifting rods (provided with the crate)</b> from the crate base and insert them through the <b>eye bolts</b>.</p>	
<p>10. Move the HiG3 Centrifuge to its final mounting location and complete the unpacking and setup.</p> <p><b>⚠ At least two persons are required to lift this HiG3! Failure to follow these instructions may result in serious injury!</b></p> <p><b>⚠ DO NOT plug anything in at this time!!</b></p>	
<p>11. Remove the <b>4x Eye Bolts</b> from the top of the HiG3 Centrifuge using a 10 mm Open End Wrench.</p> <p>Please retain these <b>Eye Bolts</b>.</p>	
<p>12. Install the included <b>4x M4 x 12 Phillips Flat Head Screws (P/N: 99-00997)</b> into the empty <b>eye bolt</b> holes.</p>	

Step	Picture/Description
<p>13. Remove the tape from the <b>Rotary Shield</b>.</p> <p>This tape can be discarded.</p>	
<p>14. Remove all the <b>hard surface protective tape</b> from around the perimeter of the HiG3.</p> <p>This tape can be discarded.</p>	
<p>15. Remove the front <b>2x Front Shipping Braces (P/N: 11-00904)</b> from the HiG3 Centrifuge.</p> <p>There are <b>4x M6 x 16 SHCS Screws (P/N: 99-00082)</b>. These require a 5mm Allen wrench.</p> <p>Please retain braces and fasteners.</p>	
<p>16. Remove the <b>4x M5 x 25 SHCS Screws (P/N: 99-00061)</b> from each of the <b>side shipping braces (P/N: 11-00903)</b>.</p> <p>These require a 4mm Allen wrench.</p> <p>Do not discard these braces or the fasteners.</p>	

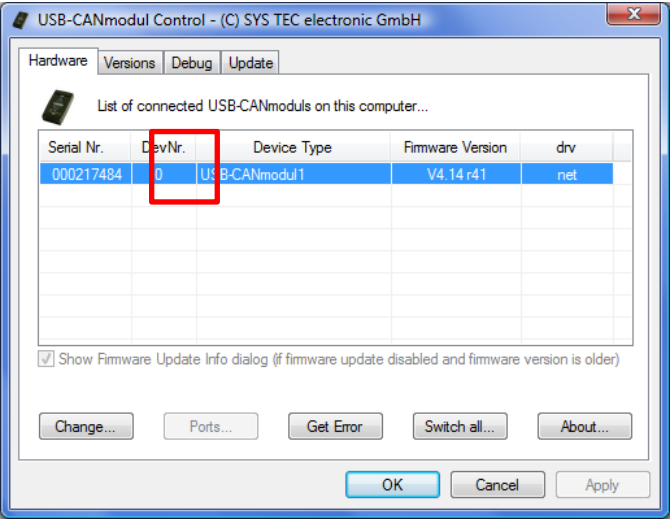

Step	Picture/Description
<p>17. Install the included <b>2x M6 x 35 SHCS, taped SHCS Screws (P/N: 99-00088)</b> into each <b>Side Shipping Brace</b>.</p> <p>There are 2x pre-tapped <b>M6 holes</b> on each <b>Side Shipping Brace</b>.</p> <p>Please do not discard these braces or their fasteners.</p>	
<p>18. Use the <b>M6 x 35 taped SHCS Screws</b> to carefully pull out each <b>Side Shipping Brace</b>.</p> <p>There will be some resistance.</p>	
<p>19. Remove the blue tape covering the <b>Side Stops (P/N: 12-01898)</b>. Note the grease underneath the tape.</p> <p>Install the included <b>side stops</b> into each side of the HiG3 Centrifuge, using <b>4x M5 x 16 SHCS Screws with Loctite</b> each.</p> <p>The notch in the <b>Side Stop</b> <b>MUST</b> be on top.</p> <p><b>! WARNING: Installed side stops MUST be oriented correctly. Shipping braces MUST NOT be left in the HiG3!</b></p>	

Step	Picture/Description
<p>20. Install the included <b>lower side fan covers (P/N: 11-00843)</b> on each side of the HiG3 Centrifuge.</p> <p>They require <b>4x M4 x 6 Phillips Flat Head screws (P/N: 99-00994)</b> each.</p> <p>These screws are also included.</p> <p><b>Before proceeding, ensure the HiG3 is fastened securely in its final mounting position.</b></p>	

## HiG3 Centrifuge Setup


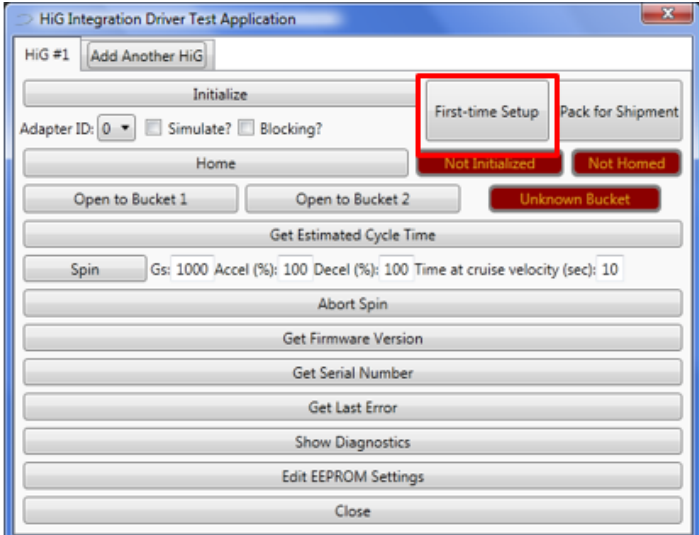
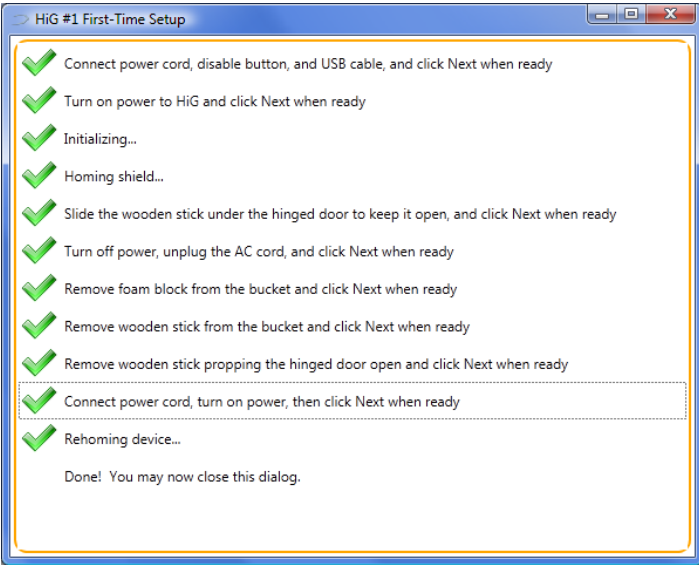
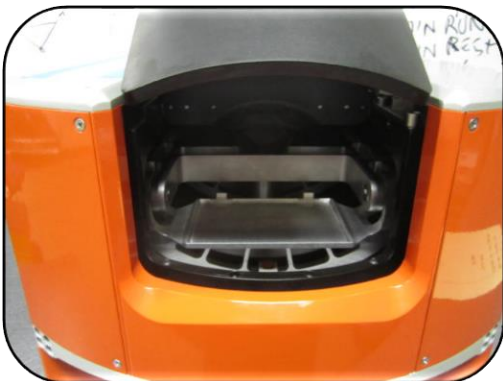
Step	Picture/Description
<p>1. Install the HiG Integration Software from the USB drive onto the workstation that will be used to operate the HiG3 Centrifuge.</p>	<p>The installer (.msi) will be in HiG Integration Software Version NNNNN folder.</p>
<p>2. Connect the included <b>USB cable with Ferrite (P/N: 12-02901)</b> from the workstation to the HiG3 Centrifuge.</p> <p>DO NOT plug in the remaining cables at this time.</p>	<p>N/A</p>
<p>3. Open <b>USB-CANmodul Control</b>.</p>	<div data-bbox="695 888 927 1142" data-label="Image"> </div> <p>A workstation desktop icon should automatically install during the installation process.</p> <p>Otherwise, it is located at:</p> <p><b>C:\Program Files (x86)\SYSTEC-electronic\USB-CANmodul Utility Disk\Bin\Usbcancp.exe</b></p> <p>The application must be <b>Run as Administrator</b>.</p>



Step	Picture/Description
<p>4. Note the value in the <b>DevNr.</b> column, as it will be required in the next step.</p> <p>It is <b>0</b> in the example to the right.</p> <p><b>NOTE:</b> The <b>Firmware Version</b> may vary.</p> <p>For multiple units on the same workstation, contact <a href="mailto:support@bionexsolutions.com">support@bionexsolutions.com</a>.</p>	 <p>The screenshot shows the 'USB-CANmodul Control' window by SYS TEC electronic GmbH. It has tabs for Hardware, Versions, Debug, and Update. The 'Hardware' tab is active, displaying a table titled 'List of connected USB-CANmodules on this computer...'. The table has columns: Serial Nr., DevNr., Device Type, Firmware Version, and drv. The first row shows Serial Nr. 000217484, DevNr. 0 (highlighted with a red box), Device Type US: B-CANmodul1, Firmware Version V4.14 r41, and drv net. Below the table is a checkbox 'Show Firmware Update Info dialog (if firmware update disabled and firmware version is older)' which is checked. At the bottom are buttons: Change..., Ports..., Get Error, Switch all..., About..., OK, Cancel, and Apply.</p>
<p>5. Connect the <b>Power Cable</b> to the rear of the HiG3 Centrifuge.</p>	<p>N/A</p>
<p>6. Connect the <b>E-STOP (P/N: 11-00929)</b> to the rear of the HiG3 Centrifuge.</p>	 <p>The image shows a yellow rectangular E-stop button with a prominent red circular push-button in the center. A grey braided cable is connected to the bottom of the button and is coiled next to it. The cable ends in a blue and silver connector.</p>
<p>7. Open the <b>HiG Integration Test App.</b></p>	<div data-bbox="695 1346 889 1682" data-label="Image"> <p>The icon is a blue rounded rectangle with a white square icon containing a blue 'H' and a green 'G'. Below the icon, the text 'HiG Integration Test Container rev. 8430' is displayed in a stylized font.</p> </div> <p>It is located at:</p> <p><b>C:\Program Files (x86)\BioNex\HiG\HiGIntegration TestApp.exe</b></p> <p>Or use the desktop shortcut if it is available.</p> <p>The revision number may vary.</p>

Step	Picture/Description
<p>8. Set the <b>Adapter ID</b> to the same <b>DevNr.</b> value noted in Step 4.</p>	 <p>The screenshot shows the 'HiG Integration Driver Test Application' window. At the top, there's a title bar and a close button. Below it, 'HiG #1' is displayed next to an 'Add Another HiG' button. The 'Initialize' button is highlighted with a red box. Below it, the 'Adapter ID' is set to '0' in a dropdown menu, which is also highlighted with a red box. To the right of the dropdown are checkboxes for 'Simulate?' and 'Blocking?'. Further right are buttons for 'First-time Setup' and 'Pack for Shipment'. Below these are 'Not Initialized' and 'Not Homed' status buttons. The 'Home' button is below the status buttons. Further down are 'Open to Bucket 1' and 'Open to Bucket 2' buttons, followed by an 'Unknown Bucket' button. A 'Get Estimated Cycle Time' button is next. Below that is a 'Spin' button with input fields for 'Gs: 1000', 'Accel (%): 100', 'Decel (%): 100', and 'Time at cruise velocity (sec): 10'. Below the 'Spin' button is an 'Abort Spin' button. At the bottom are buttons for 'Get Firmware Version', 'Get Serial Number', 'Get Last Error', 'Show Diagnostics', 'Edit EEPROM Settings', and 'Close'.</p>
<p>9. Click <b>Initialize</b>.</p>	 <p>This screenshot is identical to the one above, but the 'Initialize' button is now highlighted with a red box, indicating the next step in the process.</p>



Step	Picture/Description
<p>10. Click <b>First-time Setup</b>.</p> <p> <b>WARNING: Pinch Hazard.</b>  <b>Keep clothing, jewelry, hair, hands and fingers clear of the HiG3 rotary shield and door when it closes and during operation!</b></p>	
<p>11. Follow the steps in the <b>First-time Setup</b> dialog box.</p> <p>Please do not discard the foam block and the wooden stick.</p>	
<p>12. Visually inspect the interior of the HiG3 Centrifuge through the now open door.</p> <p>The chamber should be empty and free of packing material and any other foreign material.</p> <p>The HiG3 is now ready for operation!</p>	

## Revision History

Rev.	ECO	Reason	Effective	Originator
A	2390	Initial release as LIT-50050. Added CE Certificate, renamed from MPI-00035b. See that document for previous revisions.	1/27/2022	R. Kiesling