



# *TA Instruments*

## *Packing the Discovery HR*

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This procedure covers the steps for properly packing up the Discovery HR instrument for shipment.

**CAUTION:** The Customer assumes responsibility for any damage that occurs when the accessory is moved by someone other than a trained TA Instruments Service Representative.

**MISE EN GARDE:** Le client assume la responsabilité de tout dommage qui se produit lorsque l'accessoire est déplacé par une personne autre qu'un représentant de service TA Instruments formé.

The Discovery HR is a heavy instrument. In order to avoid injury, particularly to the back, please follow this advice:

**WARNING:** Use two people to lift and/or carry the instrument. The instrument is too heavy for one person to handle safely.

**AVERTISSEMENT:** Faites-vous aider par une personne pour dépoter cet appareil. N'essayez pas de le faire tout seul.

## *Packing Materials Required*

584024.901 Service Shipping Kit HRX0

## *Tools Needed*


Heavy Duty Packing Tape

## *Packing Procedure*

- 1 Make sure the air is turned on.
- 2 Remove the geometry from the motor spindle and store in a container. Refer to TRIOS Help or the *HR/DHR Getting Started Guide* for instructions on removing a geometry.

- 3** Remove all accessories attached to the instrument. These should be disconnected from the instrument prior to shipping. If you are shipping the accessories along with the instrument, any that do not fit into the accessory cavity of the Electronics Cabinet Unit (ECU) box should be shipped separately in its own box.


**a Peltier option:**

- I** Shut down the circulator that supplies water to the instrument.
- II** Disconnect the two fluid quick connectors on the front of the instrument.
- III** Disconnect the Smart Swap™ connector from the front of the instrument.
- IV** Press the release button  (the release LED will blink green) on the instrument keypad.
- V** Press the release button again (the release LED will become solid for 10 seconds) to release the magnet to the Peltier.
- VI** Lift the Peltier off the base.

**b Concentric Cylinder:**


- I** Shut down the circulator that supplies water to the instrument.
- II** Disconnect the two fluid quick connectors on the front of the test station.



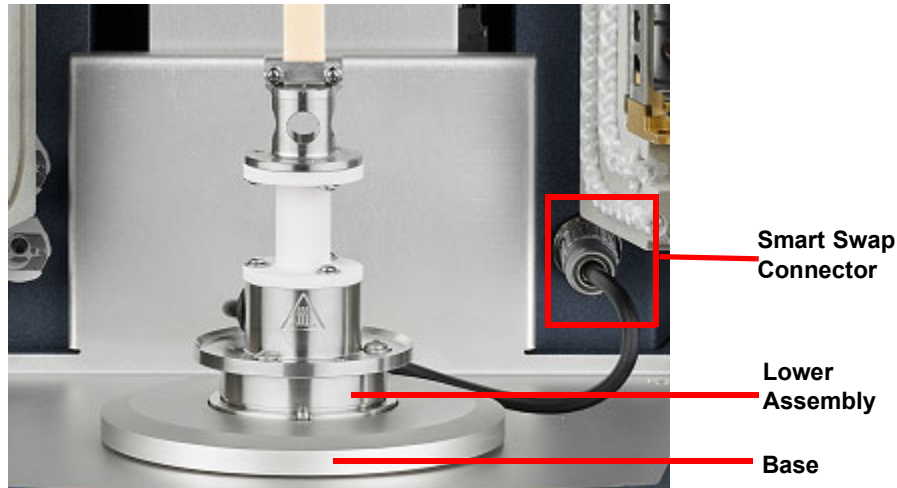
- III** Press the release button  (the release LED will blink green) on the instrument keypad.
- IV** Disconnect the Smart Swap connector from the front of the instrument.
- V** Press the release button again (the release LED will become solid for 10 seconds) to release the magnet to the Concentric Cylinder.

**VI** Lift the Concentric Cylinder off the base.

**c ETC option:**

**I** Press the release button  (the release LED will blink green) on the instrument keypad.

**II** Disconnect the Smart Swap™ connector from the instrument.



**III** Press the release button again (the release LED will become solid for 10 seconds) to release the magnet to the lower tool.

**IV** Lift the lower assembly off of the base.

**V** Turn the Electronic Box power switch to OFF.

**VI** Disconnect the purge gas line.

**VII** Remove the left and right attachments on the back of the instrument.

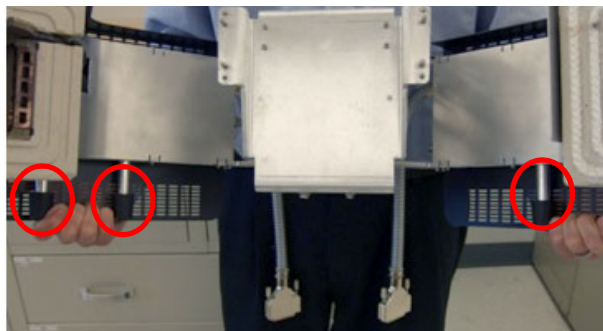


**VIII** If the ETC is equipped with a camera, disconnect the USB cable going to the back of the ETC.

**IX** Loosen the four captive screws securing the ETC.



**X** With one hand on each of the handles underneath the ETC doors, open the ETC wide and carefully pull the oven until the four locating dowels are free from the instrument.



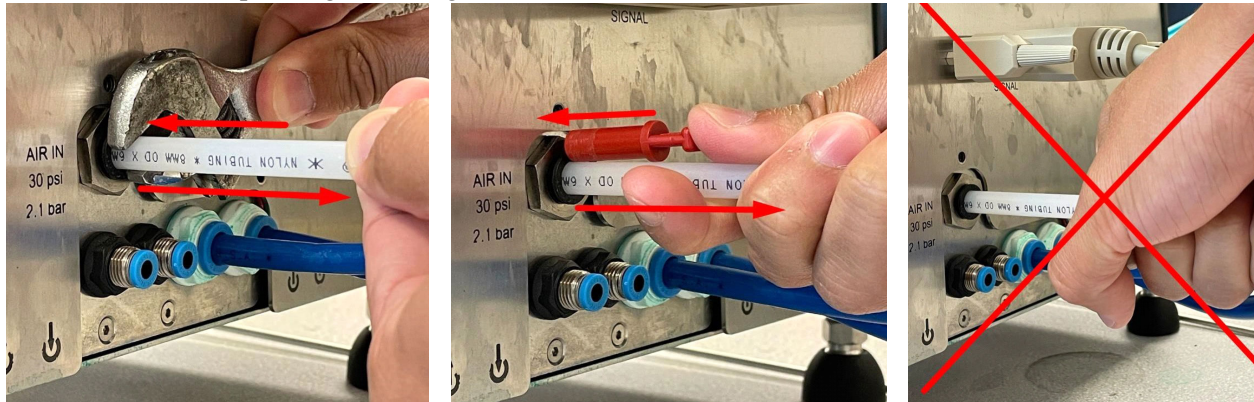
**ETC  
Handles**



**Locating  
dowels (x4)**

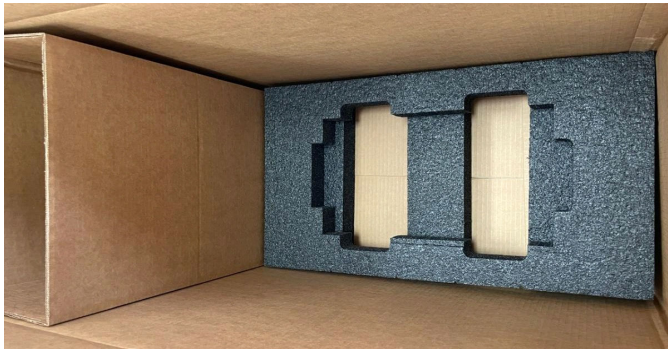
- 11** After removing the attached accessories, lower the air bearing head to the bottom-most position of its travel, and turn off the instrument.
- 12** Lock the air bearing with the draw rod and bearing clamp. Ensure that the air bearing clamp cannot be moved.

- 13** Disconnect the air line to the back of the instrument and insert the 8 mm air inlet plug. Do not pull the air line without pressing the fitting.



- 14** Disconnect all cables between the instrument and electronics box.

- 15** Prepare the ECU box by placing the foam inside.



- 16** Place the ECU in the plastic bag and then place the ECU in the box.



**NOTE:** The ECU and instrument must have matched serial numbers. If the serial numbers do not match, this will cause issues with the return; call TA Instruments Service for assistance prior to shipping.

**17** Place the foam on top of the ECU.



**18** Place the inflatable bag inside the accessory cavity of the ECU box.



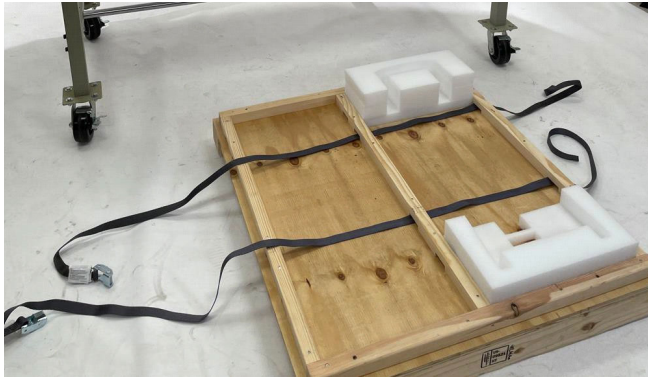
**19** Place the cables and small items in the cables bag and then place them inside the inflatable bag. Inflate the bag to keep the contents from moving during shipment.



**20** Close the box with tape.



**21** Prepare the shipping pallet, and feed through the straps.



**22** Place the bag over the instrument and place the HR into the foam cutout.



**23** Place the desiccant bag into the HR bag.



- 24** Place the foam strap protectors into position and then tighten the straps over the HR. Tape down the bottom of the bag.

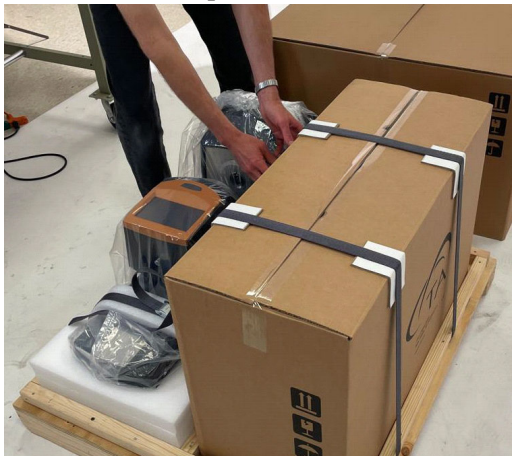


- 25** Prepare the ECU box straps.



- 26** Place the ECU box onto the pallet.

- 27** Place the straps over the ECU box and tighten to secure, using the box strap protectors as shown.



- 28** The pallet is now ready for the outer box. Place the outer box on the pallet and secure the straps, using the strap protectors as shown.



The instrument is now ready to ship.