TA Instruments
Packing the VTI SA+ Instrument

This procedure will cover the steps to properly pack up the VTI SA PLUS for shipment.

Packing Materials Provided:

SA+ Packing Sleeve (202127.002)
Bottom Foam Insert (202127.001)
SA+ Packaging End Caps (x2) (202127.003)
Top Foam Insert VTI SA+ (202127.005)
Top Foam Blank Assembly (202127.006)
Gusseted Clear LDPE Bag (202040.001)
VTI SA+ Saturator Packaging Foam Kit (820404.901)

Misc. Items Required:

Polypropylene tube (3') with Swagelok fitting
USB interface cables (2x)
Power cable
RS-232 Balance Interface Cable

Tools Required:

Shrink wrap
Strapping kit
9/16 and 11/16 wrench

Prepare the Document CD:

1. Ensure the following documents are prepared to be copied onto the CD
   - Sample Block Calibration spreadsheet
   - Sample PRT Calibration spreadsheet
   - Packing List
   - Saturator PRT Calibration Spreadsheet
   - Unit Calibration Spreadsheet (UCS)
   - Sample Temperature Controller PID settings and Pressure Factor (PF)
   - Balance Weight Verification sheet
   - Dew Point certificate of Calibration

2. Documents included on the CD
   - cal3300 (CAL Manual)
   - Comair Operator Manual
   - OGDEN etr3400 Controller Manual

- Omega temp thermometer Certificate of Calibration
- RED LION CUB4V Manual
- MFC (MKS) Documentation
- TA_SA+.ini (.ini file from instrument program located at C/Program Files/TA/SA+ Programs/TA_SA+))
- Troemner Weight Statement of Accuracy

3. Label CD with "SAPLUS-(s/n) or "SAPLHM-(s/n), depending on the balance

Prepare the Instrument for Packing:

1. Before turning the unit "**OFF,**" ensure the following conditions are met:

   - The Sample and Saturator Controllers are left in remote **"SPMD/PV.2"**
   - The front panel "**Wet/Dry**" switch is left to **Dry**
   - The front panel **"Auto/Manual"** switch is left to **Auto**
   - The **Wet** and **Dry** pots are fully Counter Clockwise (**CCW**)
   - All valves switches are "**OFF**" (down position)

Fig 1

2. The balance purge Dwyer on the back of the instrument is set to approximately 80ccms

3. Turn the instrument **"OFF"**

4. Detach the following cables/tubes from the rear of the instrument and place it in a clear bag (Except the nitrogen line)
   - Power Cable
   - The USB Cables (2x)
   - The RS-232 Balance cable

- The Nitrogen line “input,” (ensure that the nut & ferrules are replaced on the “Gas-in” bulkhead fitting)
- The vent line tubing, (ensure that the nut & ferrules are replaced on the “vent” bulkhead fitting)
- Ensure the saturator is completely empty

Fig 2

5. Balance Area
   - Remove sample holders (2x)
   - Remove hand down chains (2x)
   - Install shipping foam on both sides of the balance beam to avoid damage during shipping
   - Ensure to install right/left front arm covers
   - Ensure to install the balance cover tightly

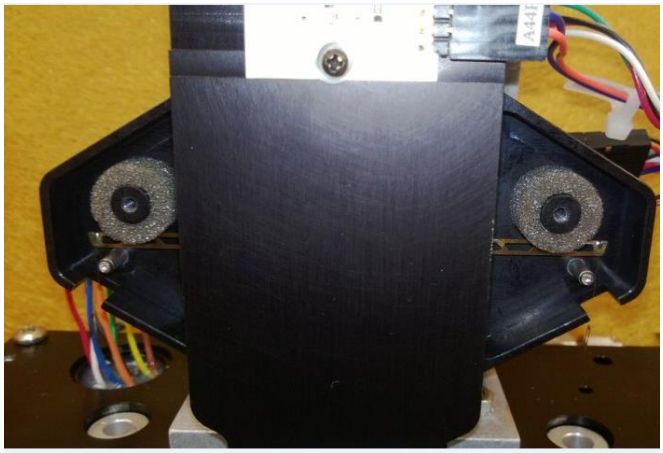

Fig 3

6. Instrument
   - Ensure all screws are mounted on all panels
   - Visually inspect the instrument for scratches/dents…etc. before packing
   - Apply voltage label above power switch

Fig 4

7. Ensure the following parts are in the **Documentation Folder**
   - DVD w/software
   - CD w/documents
   - Dew Point Certificate of Calibration

Follow the steps below to pack the Instrument in a cardboard carton:

1. Place bottom foam insert in SA+ packaging end caps (Fig 5)

Fig 5

2. Place the VTI SA+ Saturator Packaging Foam Kit in the saturator chamber. Make sure saturator is empty (Fig 6)
3. Shrink wrap the bottom of the instrument to prevent the door from opening during shipping (Fig7)

Fig 6

Fig 7

4. Gently place the instrument on the bottom foam insert (Fig 8)

Fig 8

5. Cover the instrument with a clear gusseted LDPE bag and enclose the instrument with the SA+ Packing sleeve (Fig 9)

Fig 9

6. Place the top foam insert, the SA+ Kit, and the clear bag containing the RS-232, power cable and USB cables(2x) on top of the instrument (Fig 10)

Fig 10

7. Place the top foam blank assembly over the instrument and cover it all with the SA+ packaging end caps (Fig 11& 12)

Fig 11

Fig 12

<u>TA Instruments strongly recommends using a Motor Freight Carrier!</u>