ARES-G2 / RSA-G2 LN2 Kit Installation Instructions

Parts Supplied

Table 1 Parts supplied

Description	Quantity
LN2 Installation Instructions	1
LN2 Declaration of Conformity	1
LN2 cooler assembly	1
LN2 transfer line	1
LN2 flex line	1
Tube	1
Brass adapter 1/4-20 NPT	1
Coupling straight 1/4 NPT brass	2
Conn m thermocouple 1/4 NPT 3/8 tb SST	2
Relief valve 13 psi	1

Tools Required

- Tool kit included with ARES-G2 or RSA-G2 instrument
- Adjustable wrench for properly tightening fittings

Installation Procedure

This procedure explains how to install the LN2 Accessory Kit on the TA Instruments ARES-G2 or RSA-G2. The following procedure assumes an FCO mounted on the instrument.

Prepare the Instrument

1 Turn off the instrument and unplug the power cord.

2 Turn off all gas supplies at their source.

Prepare the LN2 Cooler

1 Remove the LN2 Cooler front panel by removing the four screws holding it in place.

2 From the LN2 ship kit, remove the LN2 flex line and relief valve assembly. Refer to Figure 3 for part identification, if necessary.

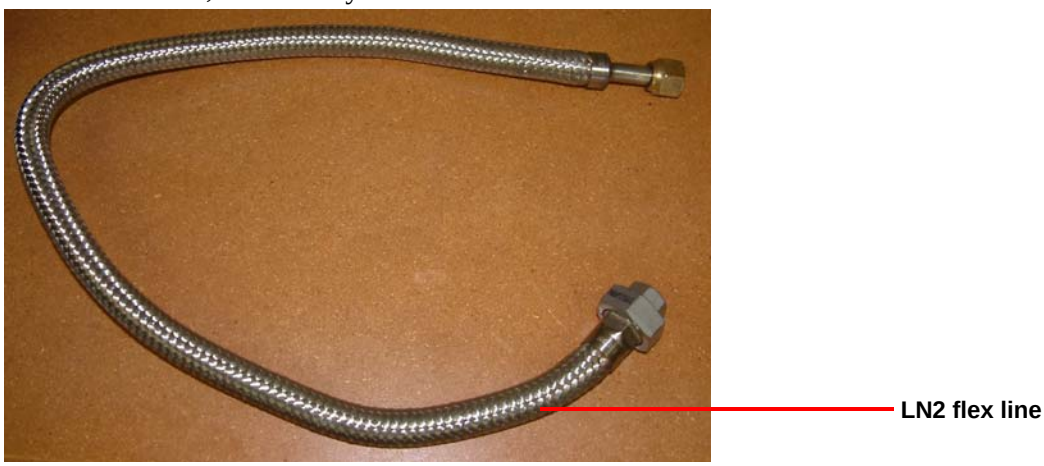

Figure 1 Flex line shown.

3 Using the adjustable wrench, remove the fitting and plunger from the center NPT connection in the LN2 Cooler. See the figure below.

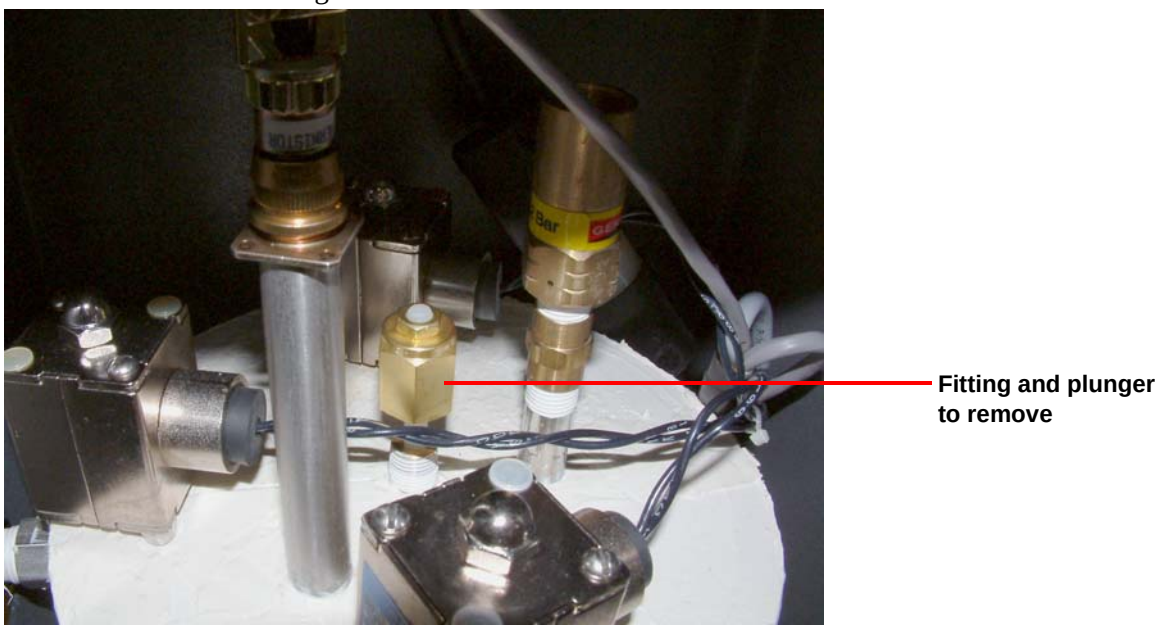

Figure 2 Fitting and plunger in LN2 Cooler.

4 Using the parts obtained in step 2 above, install the parts in the configuration shown below.

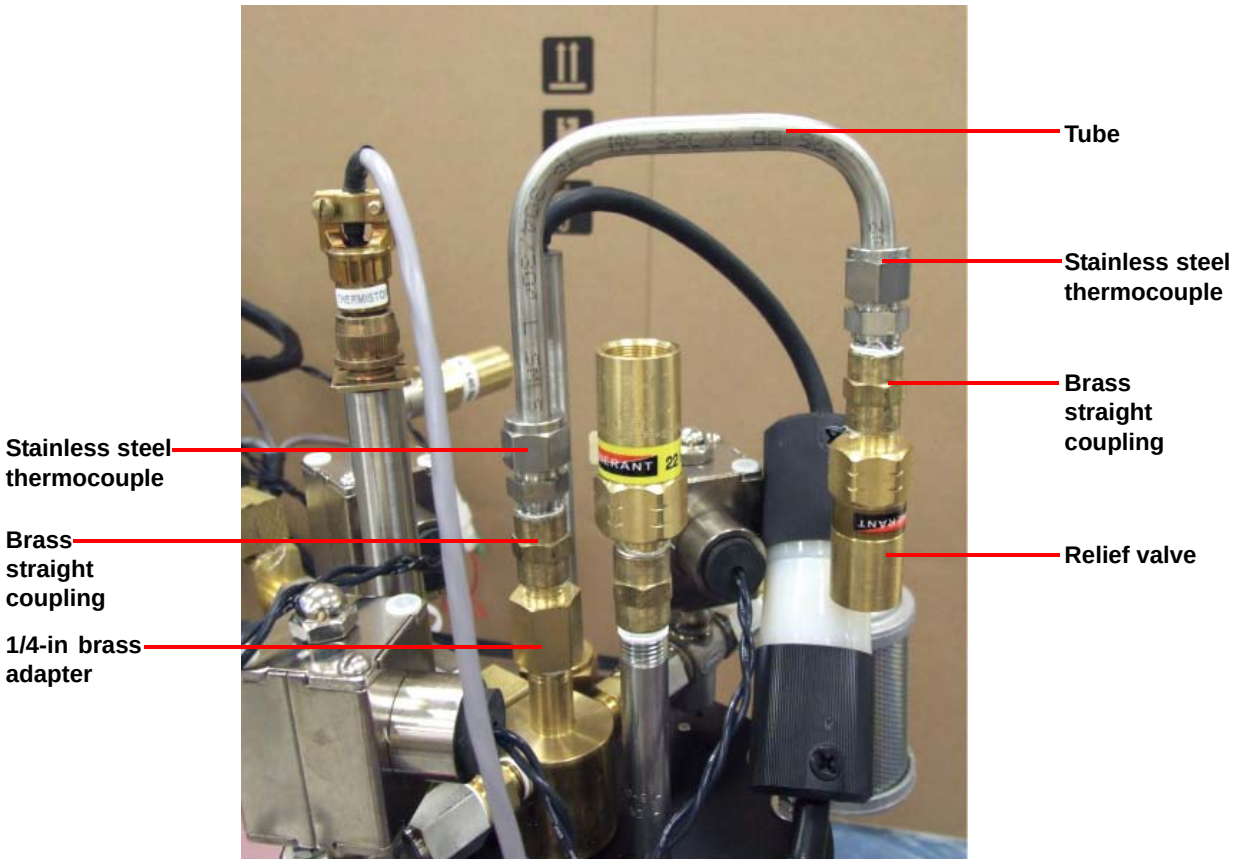

Figure 3 Tube, adapter, couplings, thermocouples, and relief valve installed in proper locations.

5 Replace the LN2 Cooler front panel using the four previously-removed screws and proceed to the next section.

Connect the LN2 Cooler to the Instrument

1 Connect one end of the LN2 flex line to the LN2 Cooler supply inlet filter connection (location shown below in Figure 4) and the other end to a liquid nitrogen supply source (bulk tank).

CAUTION: The bulk tank must be a low pressure (22 psi / 1.5 bars) source, as a high pressure tank will damage the LN2 controller. Verify that the tank is a low pressure source before completing step 1.

MISE EN GARDE: Le réservoir en vrac doit être une source de basse pression (22 psi / 1,5 bar), vu qu'un réservoir haute pression endommagerait le régulateur LN2. Assurez-vous que le réservoir est une source de basse pression avant de réaliser l'étape 1.

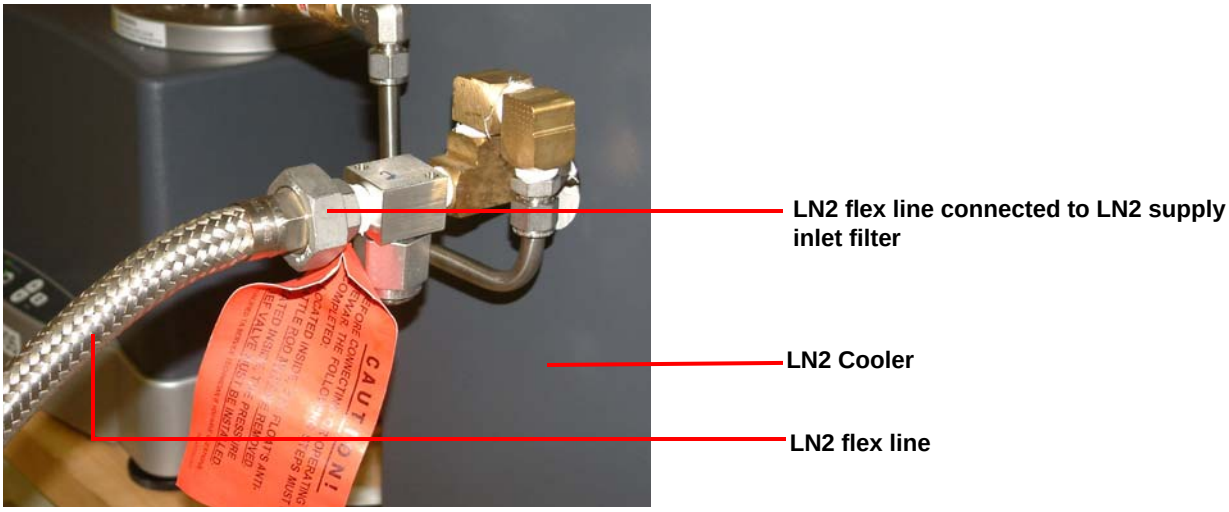

Figure 4 LN2 flex line and Cooler connection.

2 Using the adjustable wrench, remove the pipe cap from the FCO LN2 connection (circled below in Figure 5).

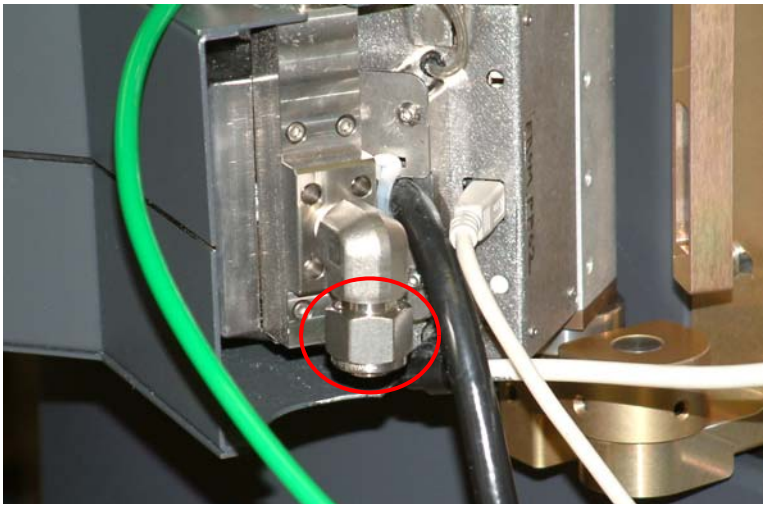

Figure 5 LN2 connection and pipe cap location (circled) on back of right-hand mounted FCO.

3 Connect the **elbowed end** of the LN2 transfer line (the hose with the larger diameter) to the FCO LN2 supply connection. Refer to Figure 8 for left-hand and right-hand mounted FCO configurations.

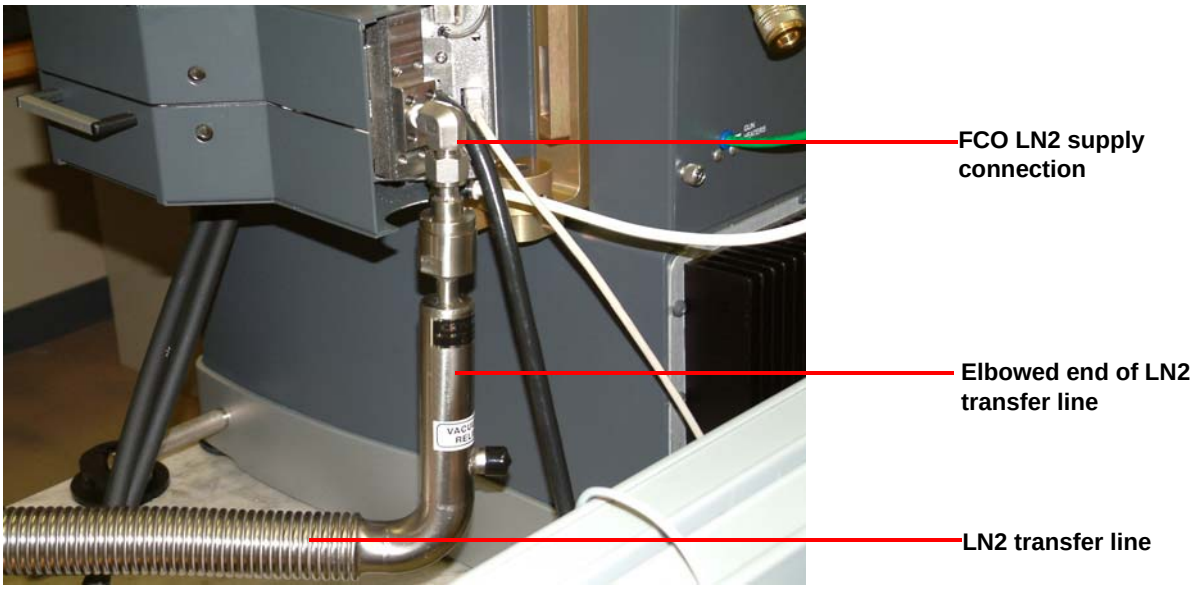

Figure 6 Transfer line connected to FCO LN2 supply connection (right-hand mounted FCO shown).

4 Connect the opposite end of the transfer line to the LN2 Cooler, as shown below.

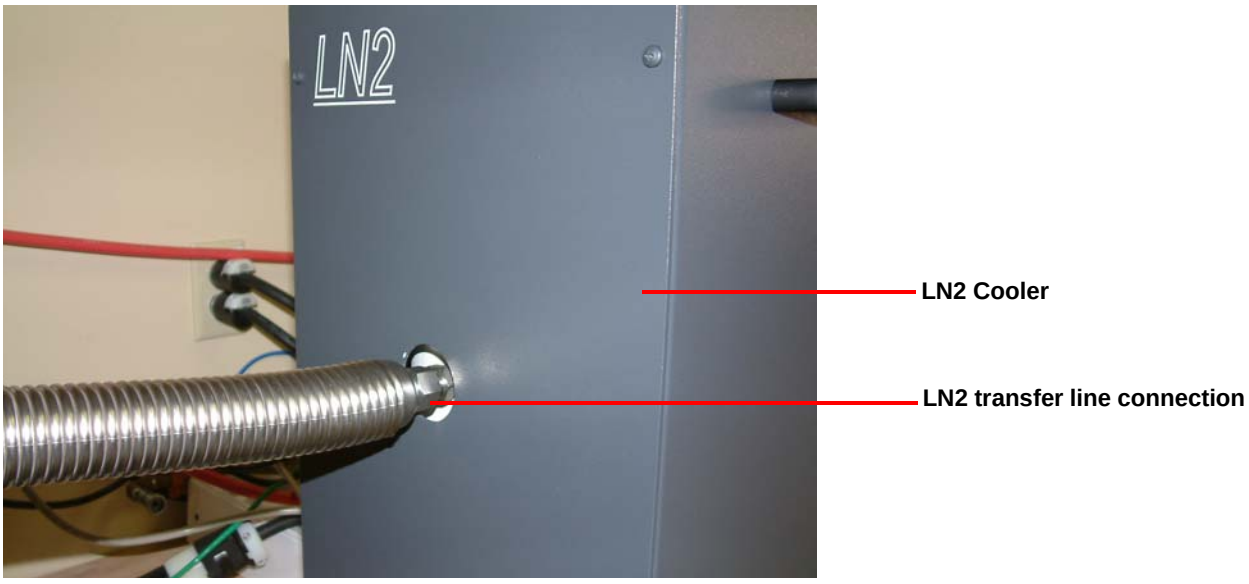

Figure 7 LN2 transfer line connection on LN2 Cooler.

The configuration should resemble the figures below.

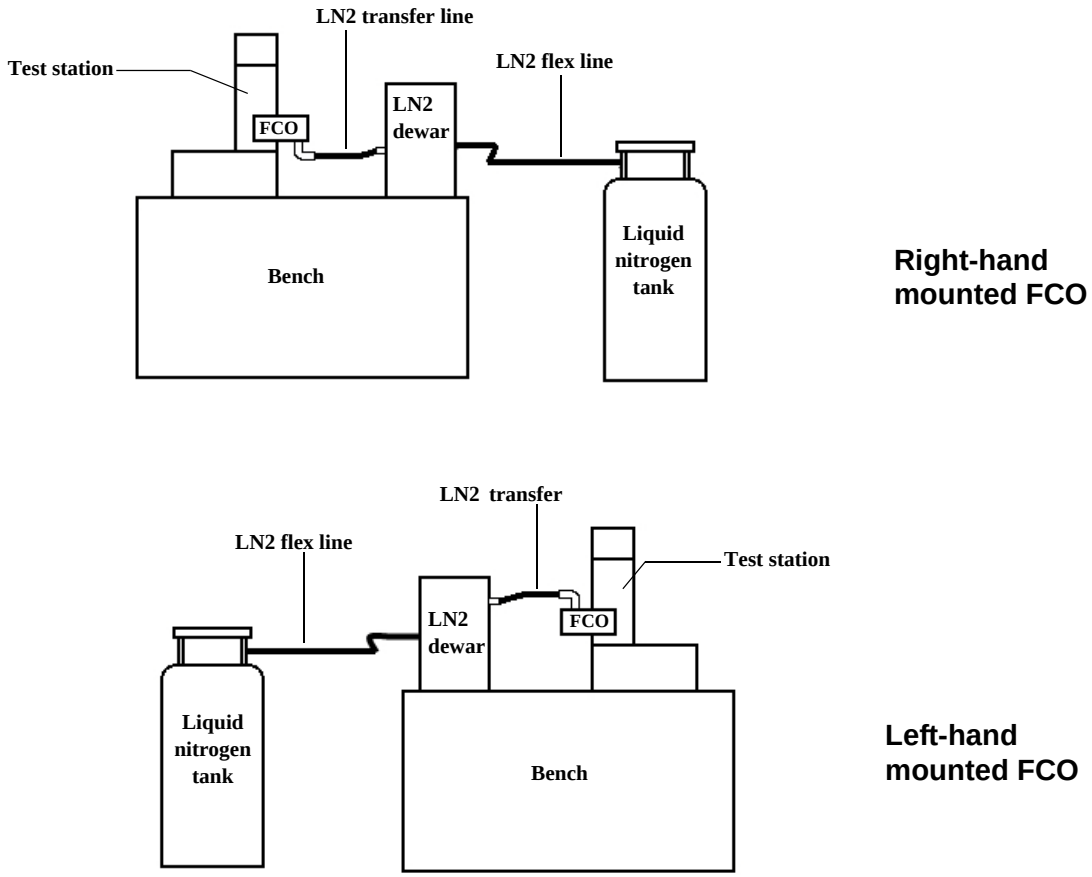

Figure 8 LN2 Cooler configuration with left-hand and right-hand mounted FCO.

5 Plug the LN2 Cooler control cable into the **LN2** connector on the FCO Controller.

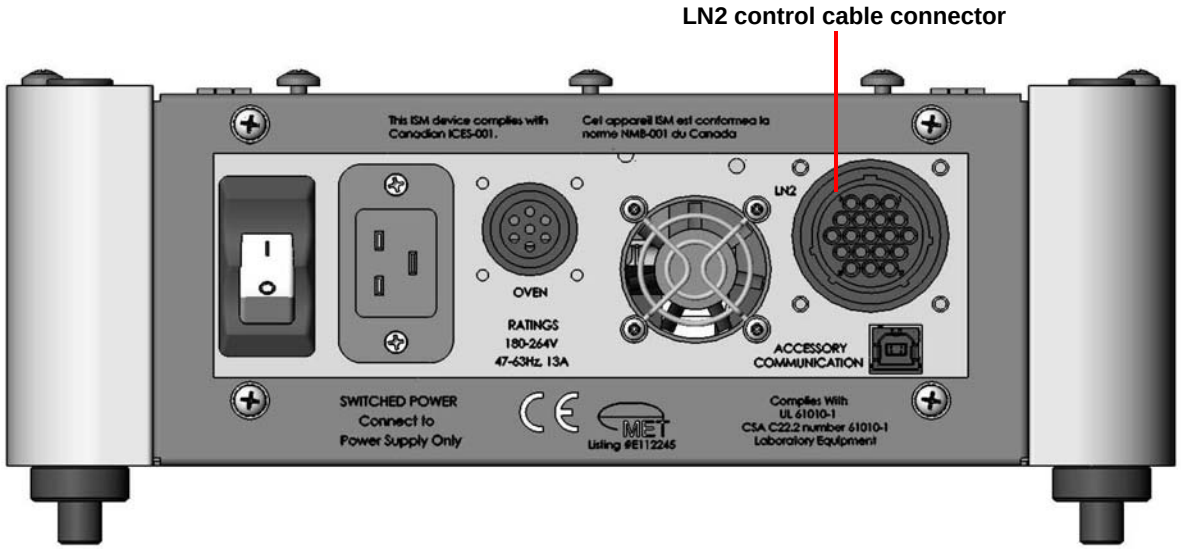

Figure 9 LN2 control cable connection location on FCO Controller.

Restore the Instrument to Operating Condition

1 Turn on gas supplies and verify correct air pressures.

2 Plug in and power on the instrument.

NOTE: When the LN2 installation is complete, be sure to open the liquid nitrogen tank's liquid output valve before operating the LN2.