ARES-G2 / RSA-G2 Chiller Panel Kit Installation Instructions

This document provides the instructions needed to completely install the TA Instruments Chiller Panel Kit on the Polycold Chiller Model PGC152 and connect it to the ARES-G2 and RSA-G2.

Installation Procedure

Assembling the Chiller Panel

CAUTION: It may be necessary for two people to handle the Chiller Panel, as it is fairly large. Use care when handling the Chiller Panel to avoid damaging the accessory.

MISE EN GARDE: Il peut s'avérer nécessaire que deux personnes manipulent le panneau du refroidisseur, vu qu'il est un peu grand. Soyez prudent lors de la manipulation du panneau du refroidisseur pour éviter d'endommager l'accessoire.

1 Carefully remove the assembled Chiller Panel from the shipping box.

2 Orient the assembly so that the flat panel with the cutout is facing up, and slide the panel into place on the back of the Chiller unit (as shown on the next page). The cutout allows clearing for the inlet and outlet pipes.

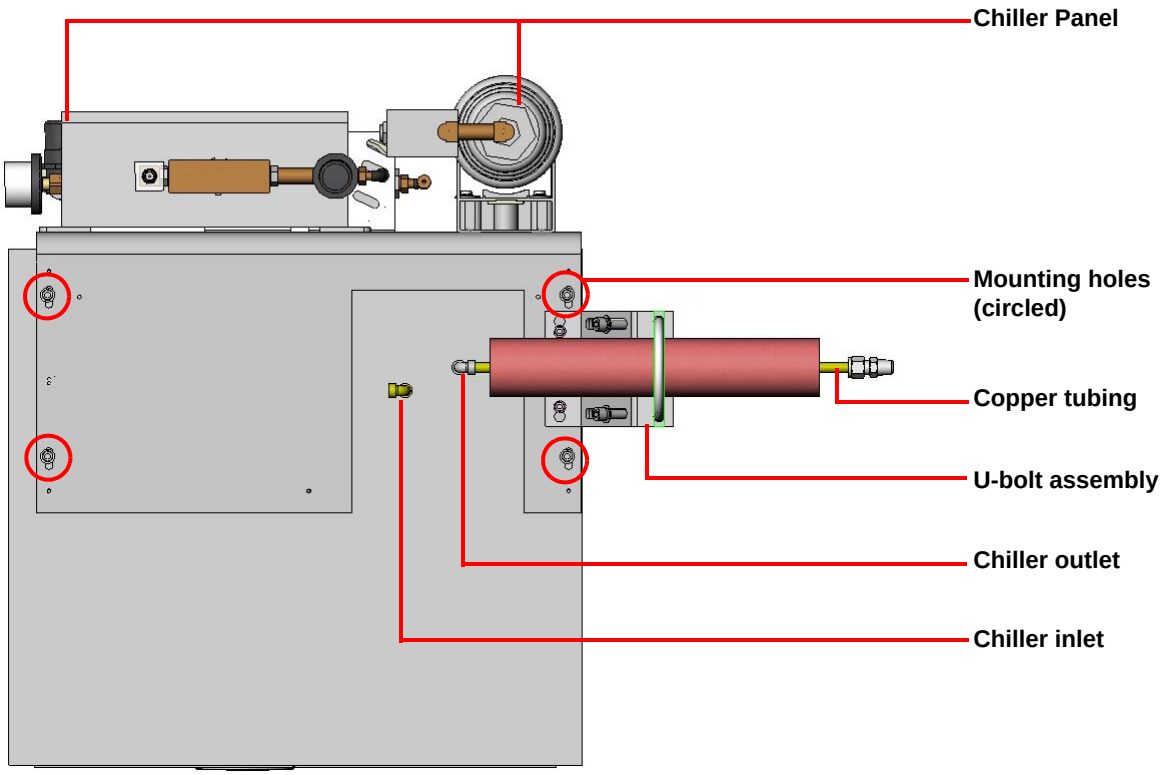

Figure 1 Top view of Chiller Panel assembly.

If your unit has four mounting holes on the top, see step 3.

If your unit does not have mounting holes, see step 4.

3 For units with mounting holes:

a Place an external tooth lockwasher (PN 203538.009) over the each of the four mounting holes. The lock washers must rest on top of the metal panel.

b Place a flat washer (PN 200968.017) on top of each of the four lockwashers.

c Place a socket head cap screw (PN 205085.075) into each of the four layered washers and tighten to secure the top panel in place.

d Proceed to step 5.

4 For units without mounting holes:

a Obtain the 8-foot cinching strap (PN 200750.001) from the kit, unravel it, and release the end from the buckle.

b Take the end of the strap and wrap it completely around the chiller to hold the assembled Chiller Panel in place. Thread the strap under the filter and pressure lines and over the sheet metal panel, as shown in Figure 2. Make sure that the strap is not twisted and that it lies flat against the panel.

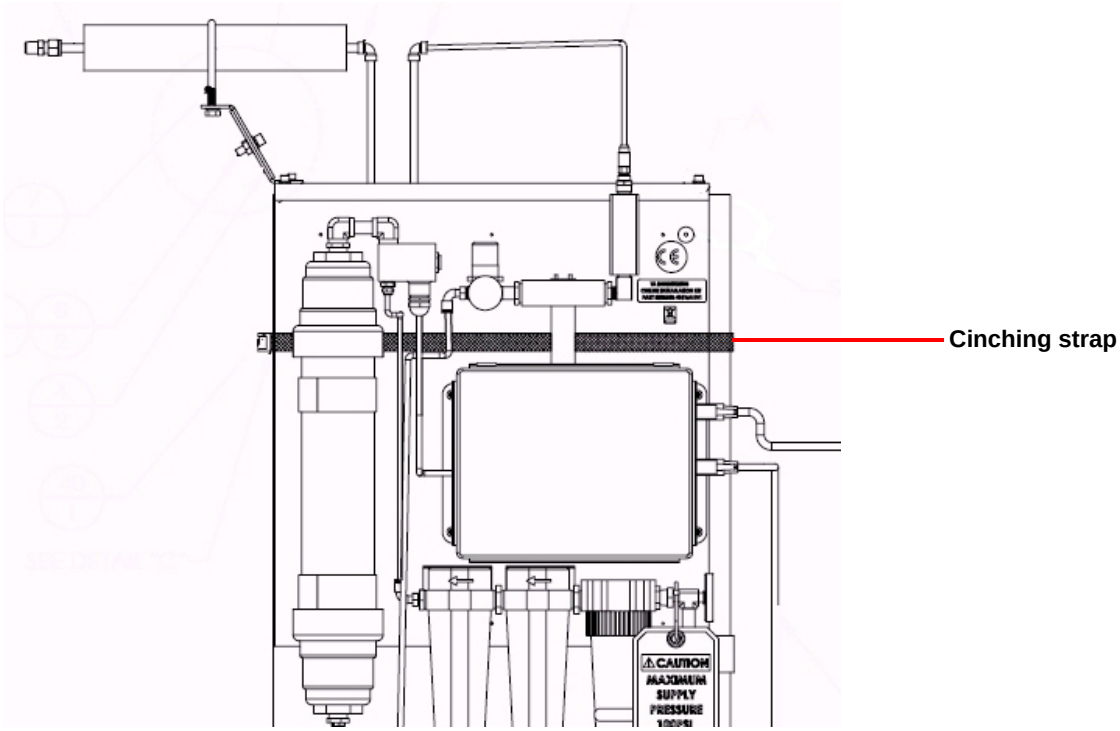

Figure 2 Cinching strap location.

c Insert the loose end of the strap into the opening on the underside of the buckle by holding the clamp open and feeding the strap through. See the figure below. Pull the cinching strap taut to secure the Chiller Panel.

Figure 3 Cinching strap buckle.

5 Obtain the U-bolt (PN 603.03036) and bracket (PN 403163.001) from the kit. Attach the U-bolt bracket assembly to the top of the Chiller using the three curved washers (PN 603.03305) and three sockethead cap screws (PN 603.02924.182). See Figure 4.

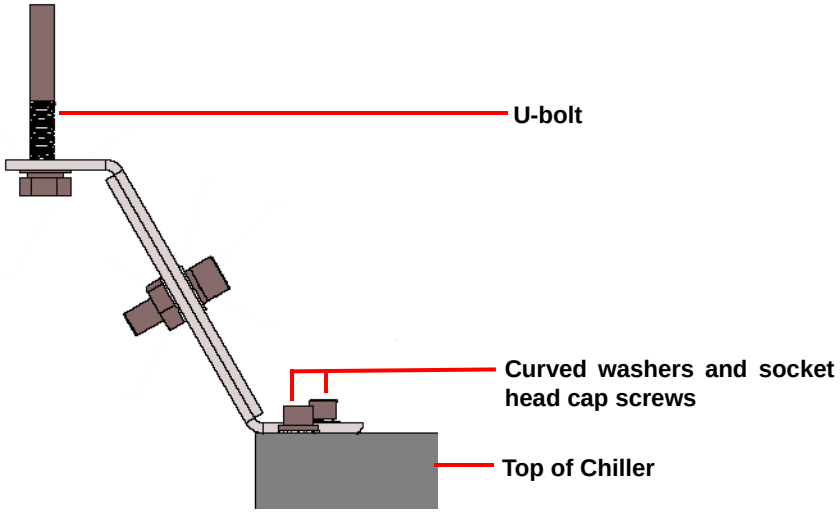

Figure 4 U-bolt bracket assembly.

6 Obtain the flowmeter (PN 603.03874) from the kit and install it on the open brass elbow at the top of the Chiller Panel. Do not overtighten. See Figure 5.

Figure 5 Brass elbow for flowmeter installation.

7 Install the 3/8-inch reducing elbow (PN 200387.001) on the Chiller inlet pipe (refer to Figure 1 for inlet location).

8 Obtain the black nylon tubing (PN 613.04185) and connect it to the top of the flowmeter. Connect the other end to the elbow on the Chiller inlet pipe. See Figure 7.

9 Connect the blue air line from the supply air source to the air dryer assembly. Verify the following:

- Supply air temperature should be below 30°C (86°F).
- Supply pressure should be ~80 psi; flow capacity should be ~5 scfm.

NOTE: Because the flowmeter is calibrated for scfm (14.7 psig and 68°F), and the actual pressure across the flowmeter is above 14.7 psig (approximately 60 psig), the actual scfm of gas flow through the meter is greater than the meter reading. The correct flow of gas is set at the factory and no adjustment of the flowmeter or pressure regulator is required.

NOTE: When running, the flowmeter will indicate a reading of approximately 60 scfm.

Installing the Chiller Panel on the ARES-G2 or RSA-G2

1 Install the Chiller Panel transfer line bracket (PN 402381.001) onto the instrument oven bracket shaft using a split clamp, as shown below.

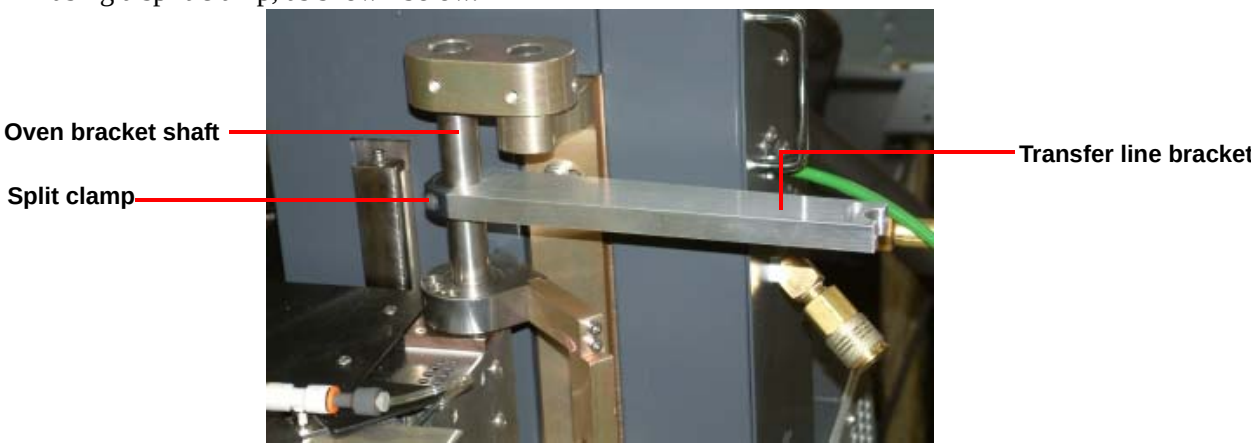

Figure 6 Chiller Panel transfer line bracket installed on oven bracket shaft.

2 Obtain the copper tubing (PN 200389.001). Determine the length of the distance between the Chiller and the instrument. Cut the copper tubing to the desired length with a tubing cutter.

NOTE: For maximum Chiller Panel performance, ensure that the length of the copper tubing is the minimum needed to connect the tubing from the FCO to the Chiller Panel.

3 Obtain the black insulation foam tubing (PN 201101.001) and cut it one to two inches shorter than the copper tubing.

4 Slide the black insulation foam tubing over the copper tubing.

5 Connect the insulated copper tubing to the 3/8-inch brass elbow (PN 299793.023) on the Chiller outlet pipe. Place the U-bolt (PN 603.03036) over the insulated tubing and secure it to the bracket, as shown in Figure 7.

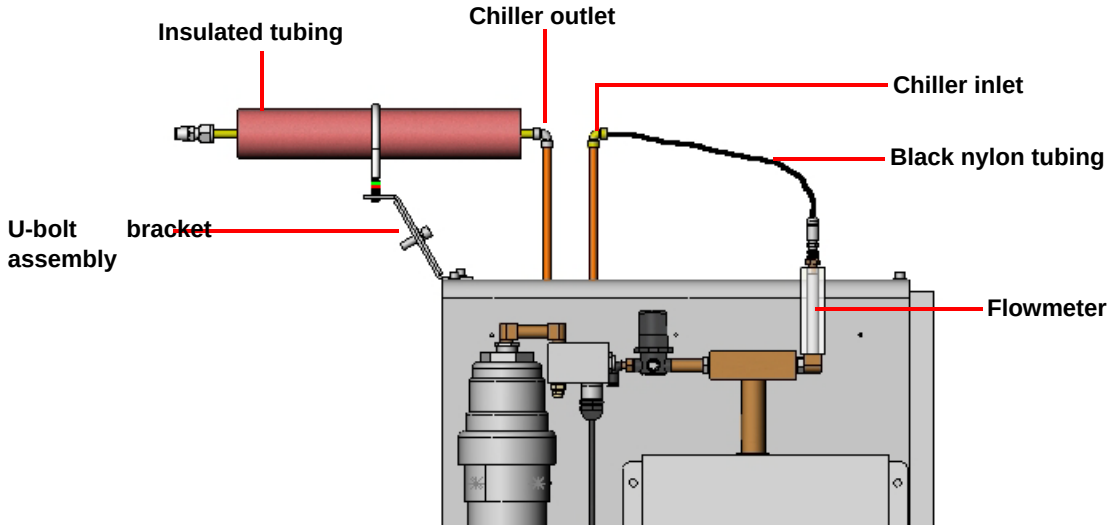

Figure 7 Chiller Panel assembly.

6 Install the transfer line (PN 402380.001).

a Remove the plug from beneath the FCO; this is where to install the transfer line. Refer to Figure 8 for the location of the plug.

b Install the swivel-end of the transfer line onto the FCO, as shown below.

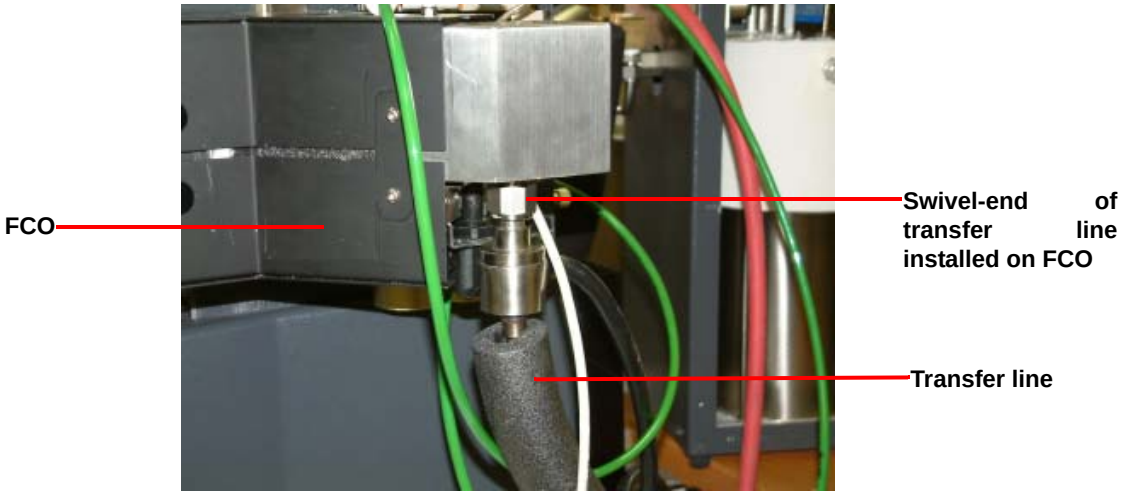

Figure 8 Transfer line installed on FCO.

NOTE: If the oven is on the left side of the instrument, the transfer line connects on top of the FCO.

c Install the other end of the transfer line onto the Chiller Panel transfer line bracket using a split clamp, as shown in Figure 9. Note that it may be necessary to adjust the bracket in order to properly install the transfer line.

d Install the brass elbow (PN 299793.023) onto the transfer line, as shown below.

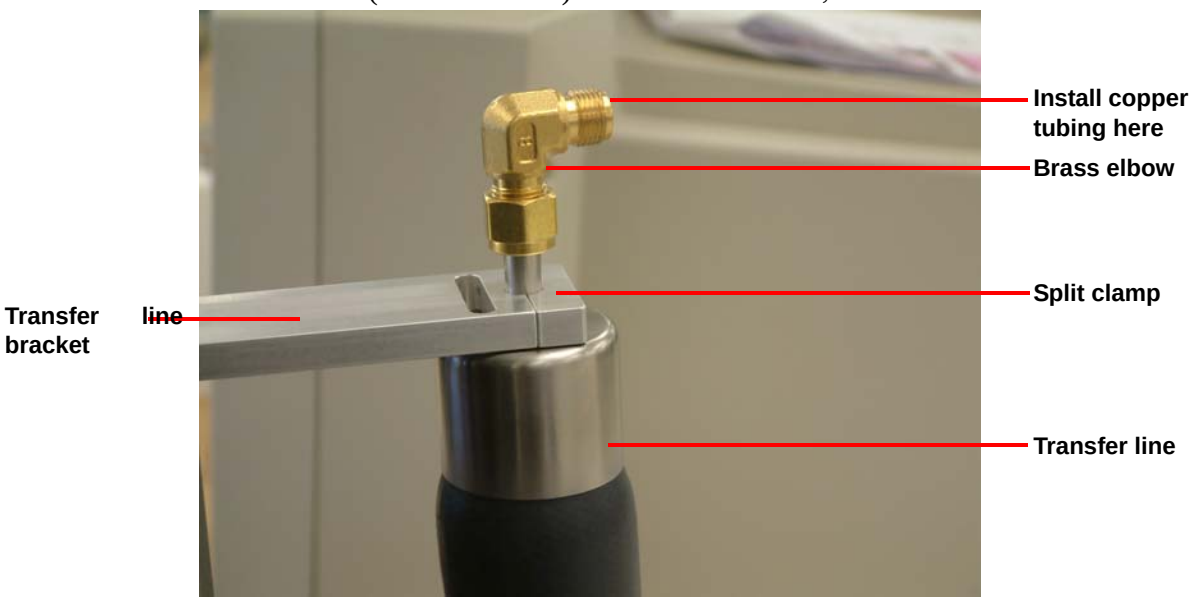

Figure 9 Transfer line installed on Chiller Panel transfer line bracket and brass elbow.

7 Attach the copper tubing to the brass elbow (refer to Figure 9 for location).

8 To improve insulation, wrap insulation tape (included in kit; PN 613.02973) around any exposed connections that exist between the outlet of the chiller and the transfer line.

9 Connect the communication cable (PN 402165.001) from the Chiller Panel to the FCO control box, as shown below. Then connect the DB9 enabling cable (PN 200428.001) from the Chiller Panel (connection shown below) to the 9-pin receptacle to the right of the on/off switch on the Chiller itself.

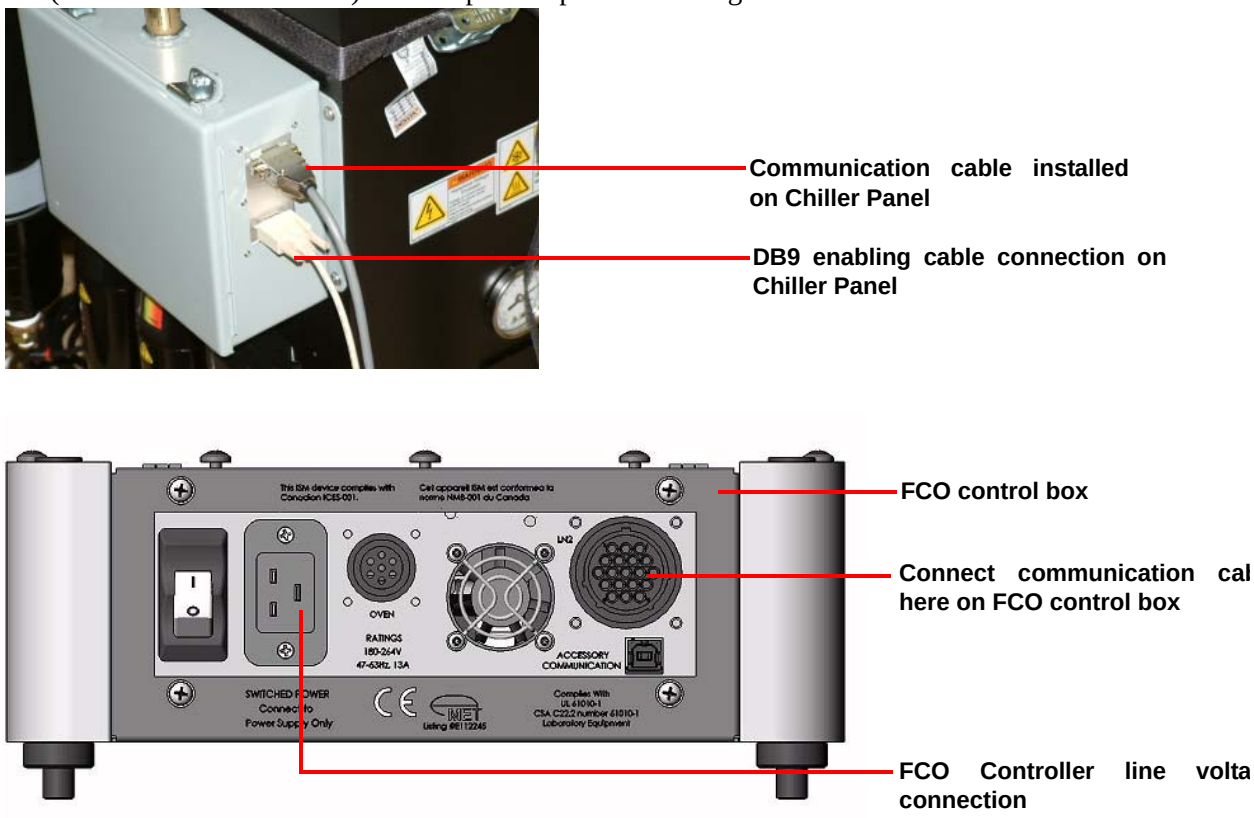

Figure 10 Connecting the communication cable.

10 Turn on the Chiller at its panel and refer to its documentation for operation instructions.