

INSTRUCTION MANUAL

Section 1: Software Installation

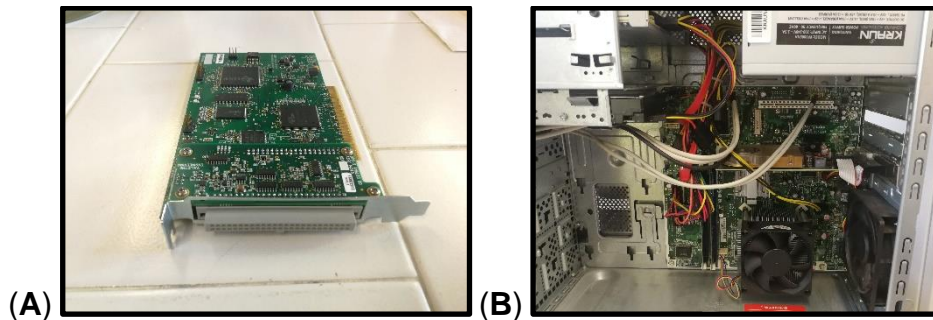
1a) Go to https://www.validyne.com/product/easy_sense_software/ and then click on "DOWNLOAD PCI SOFTWARE". There you can get the latest version of Easy Sense 2100 and all the drivers.

1b) Run the downloaded executable and follow the instructions on the screen.

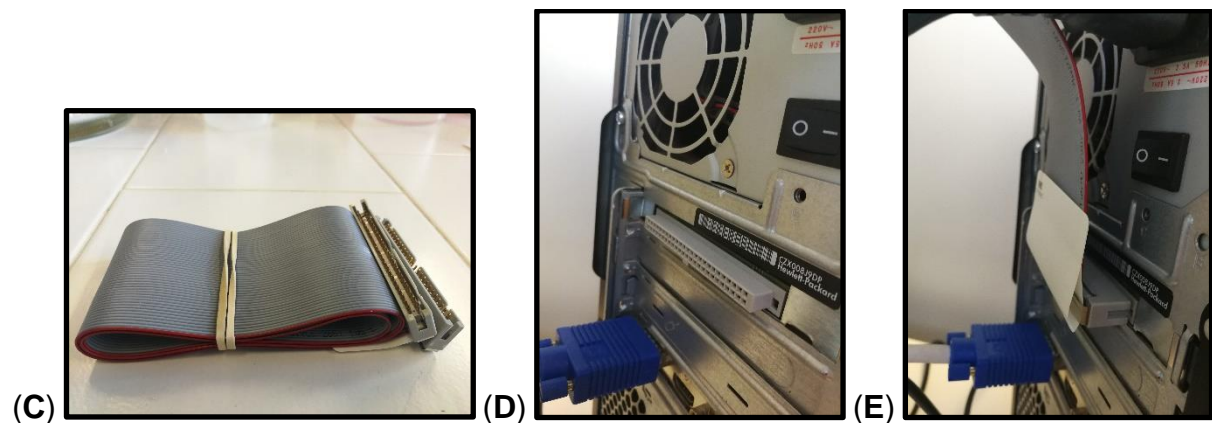
1c) Once you are finished you are now ready to install the UPC2100 PCI card into your computer.

CAUTION: *Easy Sense 2100 software must be installed before inserting the UPC2100 card into a PCI slot.*

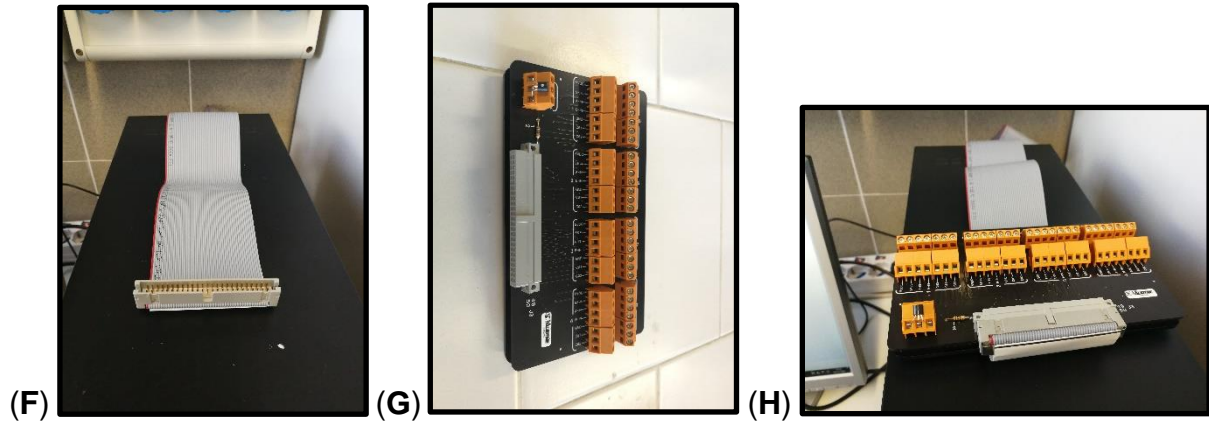
Section 2: Installing the Card



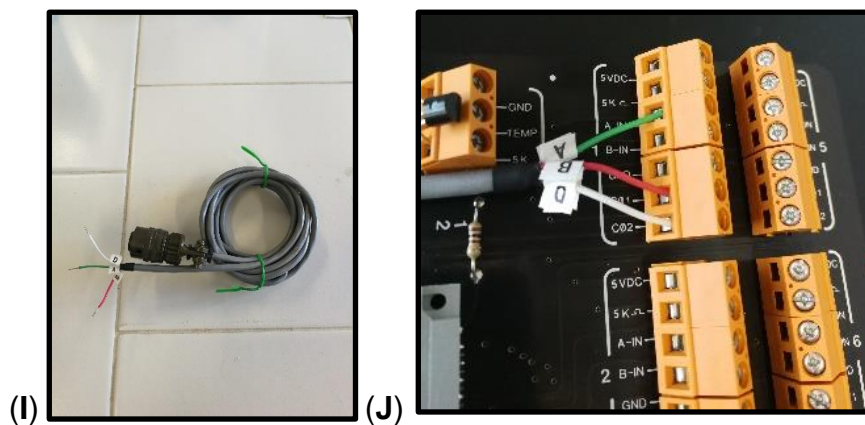
2a) Insert the UPC2100 PCI Sensor Interface card (A) into a free PCI slot on the computer (B)



2b) With the power off, connect the 5 ft Ribbon Cable, P/N 12870-5, (C) to the card on the back of the computer (D, E)



2c) Lay the cable on top of the computer (F) and connect the Analog Input Terminal Block, P/N 12871-1 (G, H)



2d) Take the DP15 Pressure Transducers cable (I) and connect the white, red and green wires to the Terminal Block in the locations shown (J).

Section 3: UPC2100 Hardware Installation

3a) Power on your PC and you will see the Driver Software Installation screen. Click on Close.

3b) Then click on the Start Orb and type **Device Manager** in the bottom search text box. Click on the Device Manager Icon.

3c) Once you are at the Device Manager screen, open the **Other Devices** tab and then **right click** on the **Other PCI Bridge Device**. Click on **Update Driver Software...** menu option.

3d) Click on **Browse my computer for driver software**.

3e) On the next screen click on the browse button and search for the folder where you installed Easy Sense. The default folder on a 64bit machine is **C:\Program Files (x86)\Easy Sense 2100** and on a 32bit machine is **C:\Program Files\Easy Sense 2100**.

3f) Click on Next once you have found the folder and made sure **Include Subfolders** is checked.

Section 4: Assembly of pipes and fittings to the transducer



(A)



(B)



(C)

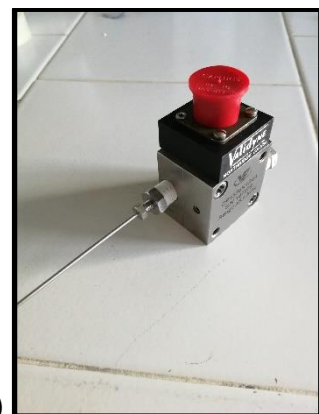
4a) Screw to the DP15 Pressure Transducers (A) the Fittings Valco Male Pipe to Valco Internal Adapter 1/8"NPT male to 1/16"ZDV 1.00mm bore (code RE20158) (B). For a perfect pressure seal, use Teflon thread in the thread (C).



(D)



(E)



(F)

4b) Use Ferrule SS 1/16" SS Valco Ferrule 10 Pack (code RE20286) for a perfect seal with Valco Fittings (D). Connect the Capillary Tubing SS 1/16"OD x 0.02 ID x 20cm L 3-pk Orange (code RE25827) (E) to the transducers (F).

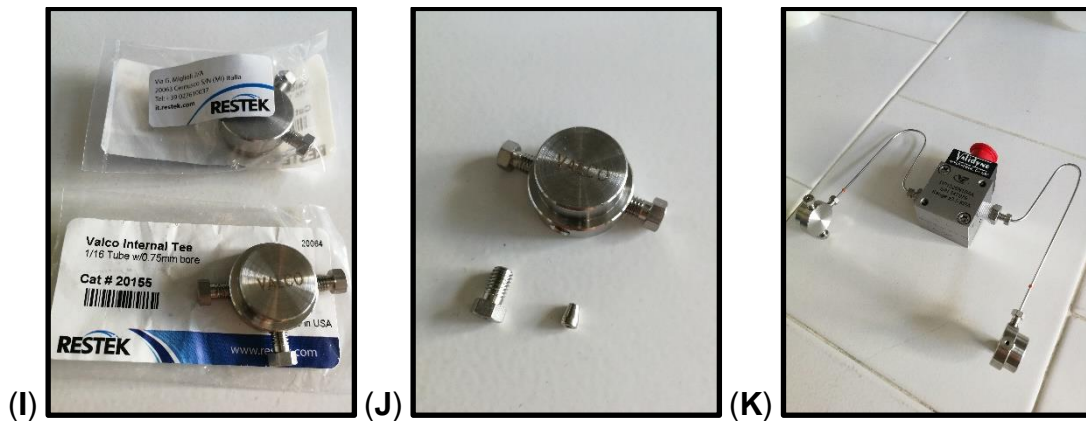


(G)

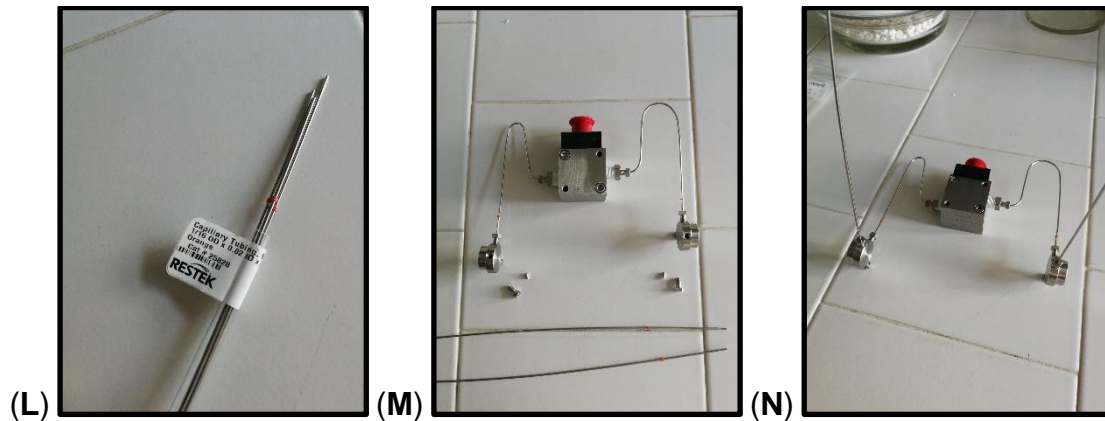


(H)

4c) Repeat this process for both the transducer holes (G). Fold the Capillary Tubing to easily insert the transducer into a small waterproof box (see below) (H).

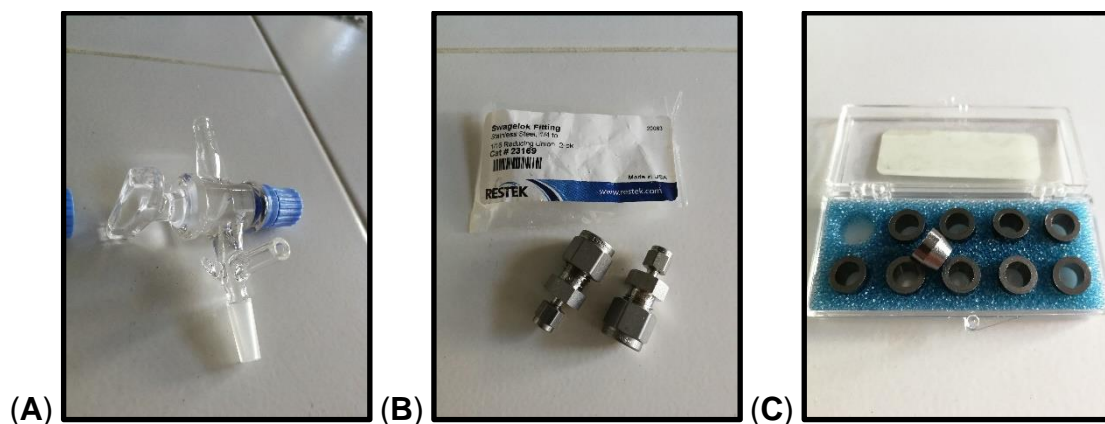


4d) Connect the Capillary Tubing from the transducer to the Fittings Valco Internal Tee 1/16" tube 0.75mm bore (code RE20155) (I, J). Use the bottom hole and leave the two holes on the same flow line free (K).



4e) Connect the Capillary Tubing SS 1/16"OD x 0.02 ID x 30cm L 3-pk Orange (code RE25828) (L) to the Fittings Valco Internal Tee 1/16" tube 0.75mm bore (code RE20155) (M). Of the two remaining free holes, use the one from the back of the transducer (N).

Section 5: Assembly of glass taps





(D)

5a) Connect the three-way glass tap (A) to Swagelok Fitting Stainless Steel 1/4" to 1/16" Reducing Union 2-pk (code RE23169) (B). For a correct pressure seal use 1/4" Graphite Ferrule (C, D).



(E)

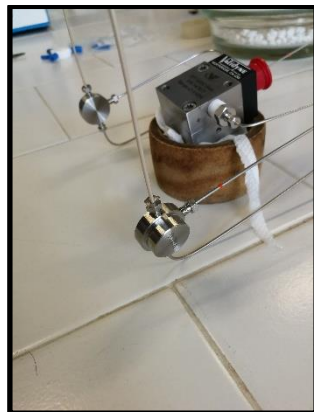


(F)



(G)

5b) Using the small part of the Reducing Union (E) attach the PEEK Tubing 1/16 OD Green Stripe 0.030 ID 3M ea. (code RE27755) (F) to the glass tap (G).

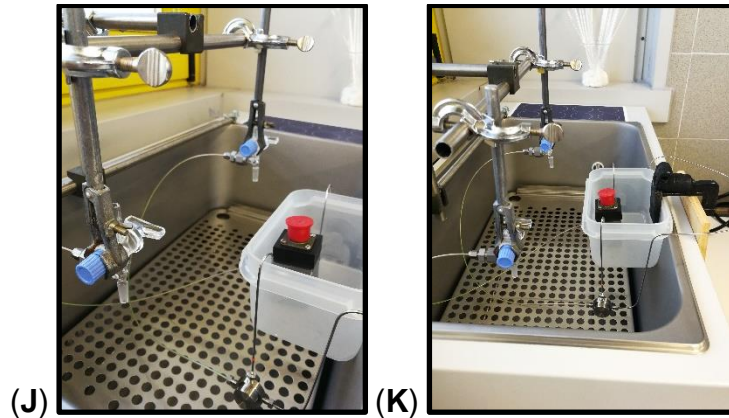


(H)



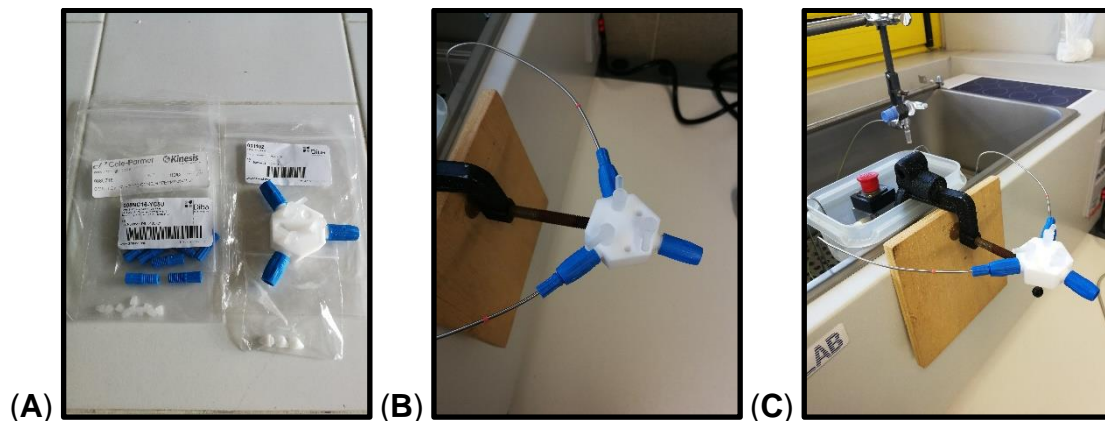
(I)

5c) Connect the PEEK Tubing 1/16 OD Green Stripe 0.030 ID 3M ea. (code RE27755) to the Fittings Valco Internal Tee 1/16" tube 0.75mm bore (code RE20155) (H). Use the free hole, the one from the front of the transducer (I).

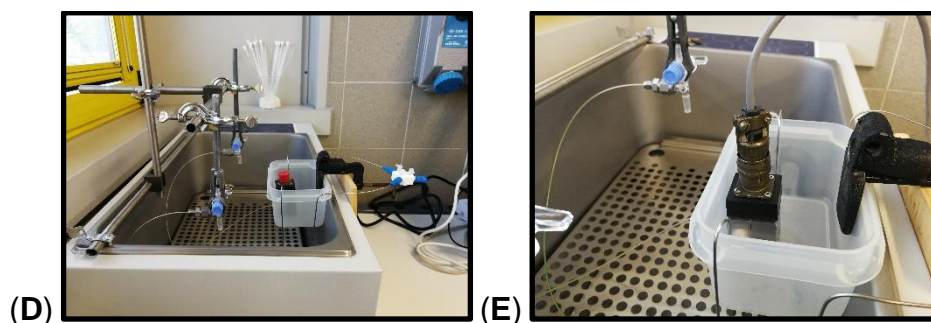


5d) Place the waterproof box (the one used previously to fold the pipes) in a thermostatic bath (J). The water level must reach the upper edge. With pliers and clamps fix the three-way glass taps (K).

Section 6: Final setting



6a) Connect the Capillary Tubing from the transducer to the VALVE, 3-WAY HEX (code 001102) (A). Also use OMNI-LOK FTG, 1/4-28, 1/16", BLUE, COMPACT HEAD, (IC 00) (code 008NC16-YC5U) and OMNI-LOK INVERTED CONE, ETFE, 1/16" (code 008CZ16) for a perfect seal between the metal capillaries and the PTFE valve (B, C).



6b) When everything is set up and fixed properly (D), connect the DP15 Pressure Transducers cable (E).