



11005 Dover Street, Unit 300  
Westminster, CO 80021  
www.softacorporation.com

303-465-1106  
877-465-1106 Toll Free  
626-608-2785 Fax

### SofTA Pre-Installation Checklist

1. **Gas Requirements:** All SofTA ELSDs require Nitrogen supplied at 60-75 psi. Physically, this should come to the instrument as a 1/8" line. Our instruments have an internal regulator, but external gas pressure should be stable +/- 2 psi for short term fluctuations.
2. **Liquid Requirements:** Depending on options, a SofTA ELSD will have either a 1/16" Valco bulkhead, or a 1/16" Teflon line, approximately 12" long.
  - a. For the bulkhead case, Teflon or PEEK tubing of sufficient length, 1/16" O.D., and an I.D. in the range of .005" to .010" will be customer supplied. Please remember that a larger I.D. will contribute to band broadening, but has the advantage of plugging less frequently. The instrument is supplied with a nut and ferrule for the Valco bulkhead.
  - b. For Teflon line case, the instrument should be located close enough to the column to connect without using other lengths of tubing or couplings. This configuration is predominately used for fast chromatography and excess tubing or fittings will decrease performance. Typically, the factory installed line is .004" I.D. though other options are available. Please consult paperwork supplied with your instrument. The instrument is supplied with a finger-tight 1 piece nut/ferrule.
  - c. In the event of a split flow configuration (common with a mass spec.), the ELSD is quite versatile. However, please keep flow to the ELSD in the .5 ml/min. to 1 ml/min. range if possible. Flow must be measured by removing the nebulizer and allowing it to spray into a graduated collection vessel for an appropriate time. Also, please use the smallest internal bore "T" when configuring the external plumbing. Internal bore T's are now available with .006" construction.
3. **Vent requirements:** As a destructive detector, an ELSD will make a gas out of whatever liquid enters the drift tube. Since many solvents used in HPLC are quite toxic, the exhaust must be sent to an appropriate vent. The exhaust on 2<sup>nd</sup> generation SofTA ELSDs is .5" O.D. Any tubing with a .5" I.D., and appropriate for the chosen the mobile phase can be used to extend to the vent. In high humidity environments, or when higher flow rates of mobile phase are being used, it is possible to condense liquid in the exhaust line. As this condensation collects at a low point, it can eventually block the exhaust completely. These conditions require a liquid trap for successful operation. Consult SofTA or your sales representative for details.



11005 Dover Street, Unit 301  
Westminster, CO 80020  
[www.softacorporation.com](http://www.softacorporation.com)

303-465-1106  
877-465-1106 Toll Free  
626-608-2785 Fax

4. **Electrical Requirements:** By configuring the AC module located in the rear of the instrument, either 120 VAC or 240 VAC can be selected as the operating voltage. The selected voltage is indicated by a small white tab protruding through the selector. Consult the manual for further details. Essentially, the ELSD has a small computer inside. As such, it is susceptible to poor quality AC power. Low line, sags, surges and spikes all contribute to erratic instrument performance. In extreme cases a line conditioner may be required. In general, if other instruments are being operated successfully on the intended circuit, your ELSD will also function well.
5. **Data Collection:** SofTA ELSDs have an analog output and in general will require an A/D converter or analog input port to integrate into most data acquisition systems. The analog output is a dual banana jack and a cable is supplied with the instrument which fits this jack and terminates in plain wires. This provides the greatest flexibility, but means the user must supply any special connectors for their particular data acquisition system.
6. **Liquid Waste:** SofTA ELSDs employ a vapor phase splitter. Some of the column effluent will be diverted to the waste port on the front of the instrument, and the remainder will be sent to the drift tube for evaporation and analysis. An adapter is supplied for connecting the liquid drain port to ¼" I.D. tubing. A 3' piece of Tygon tubing is also supplied. In the event that chemical resistance beyond Tygon is required, customer must supply an appropriate length of ¼" I.D. tubing.