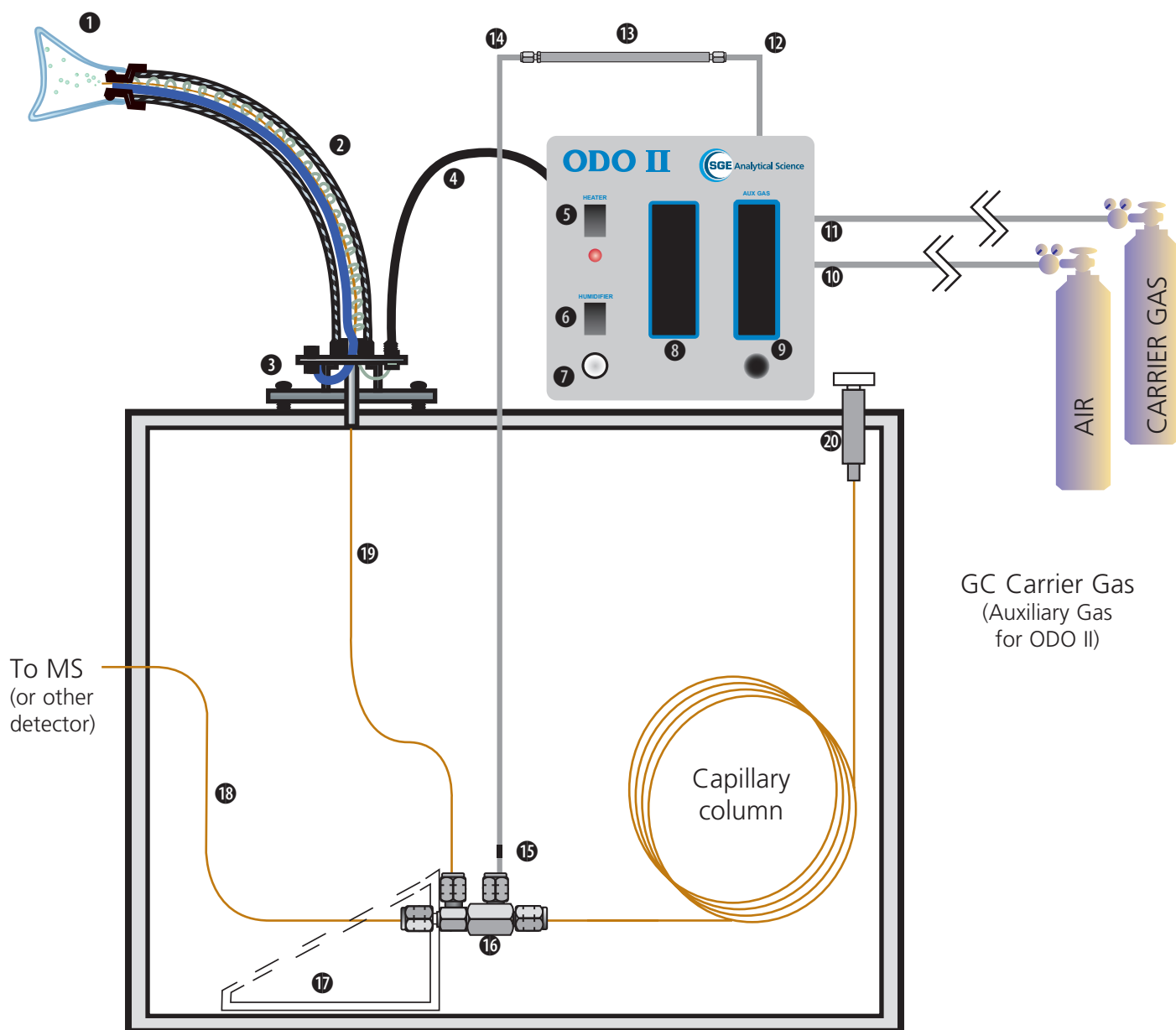




ODO II

**Installation & Operating
Instructions**



- | | |
|---|---|
| <ul style="list-style-type: none"> ❶ Glass Nose Cone ❷ ODO II heated transfer line ❸ Mounting Plate, 6890 ❹ Cable link ❺ Transfer line heater switch ❻ Humidifier switch ❼ Humidifier fill port ❽ Humidifier ❾ Auxiliary gas flow meter ❿ 1/16" SS tube with 1/8" sleeve (to "HUMIDIFIER IN") | <ul style="list-style-type: none"> ⓫ 1/16" SS tube with 1/8" sleeve (to "AUX GAS IN") ⓬ Tube, SS, 1/16" x 0.8m (200mm long, from "AUX GAS OUT") ⓭ Adsorption tube (chemical trap, AT-PCS) ⓮ 1/16" SS Tube, non marked end ⓯ 1/16" SS Tube, red marked end ⓰ Column Flow Splitter ⓱ Splitter support bracket ⓲ ODO II - MS Restrictor ⓳ ODO II - Transfer line tubing ⓴ Injection Port |
|---|---|

Warranty

The ODO II control module is guaranteed against faults in materials and workmanship for a period of twelve months from the date of invoice.

The warranty implies free repair and/or replacement of defective goods, only upon proper written proof and (where authorized) return of the defective product.

This unit has been designed to fulfill the purpose of olfactory detection for gas chromatography. This warranty is void if the instrument is used for any unrelated purposes. SGE reserves the right to refuse free service under warranty on any unit that has been abused or tampered with in any way.

No other warranty or representation is expressed or implied by SGE for its products with respect to merchantability, fitness for any particular use or purpose or any other matter. SGE shall not, under any circumstances, be liable for any incidental, consequential, or compensatory damages arising from use of, or in conjunction with, its products. The maximum liability for breach of warranty shall be the invoice price of said products.

Safety

All gasses supplied to this unit should not exceed 100psi.

Ensure all parts of the GC have cooled to room temperature before installation of the ODO II. Air should only be used as the humidifier gas. DO NOT use helium as the humidifier gas. The ODO II should only be used by experienced analysts who need to be aware of the potential hazard of smelling odiferous compounds.

Safety glasses are recommended when installing the transfer line tubing.

| | | |
|-----|--|----|
| | Overview | 1 |
| 1. | Installation of the transfer line | 2 |
| 1.1 | HP/Agilent Technologies 6890 GC | 2 |
| 1.2 | Varian® 3800/3380 GC | 4 |
| 1.3 | Shimadzu 17A GC | 5 |
| 1.4 | HP/Agilent Technologies 5890 GC | 6 |
| 1.5 | Other GC types | 7 |
| 2. | Connecting instrument grade AIR to the ODO II control module | 8 |
| 3. | Connecting AUXILIARY GAS to the ODO II control module | 9 |
| 4. | Installing of and first connections to the column flow splitter | 10 |
| 5. | Connecting the transfer line to the ODO II control module | 12 |
| 6. | Connecting the column flow splitter to the transfer line | 13 |
| 7. | Connecting the column flow splitter to a GC detector | 14 |
| 7.1 | Connecting the column flow splitter to a Mass Spectrometer Detector | 14 |
| 7.2 | Connecting a column flow splitter to a detector at atmospheric pressure (FID, ECD, etc.) | 15 |
| 8. | Filling the Humidifier | 16 |
| 9. | Before running a chromatogram | 16 |
| 10. | Humidifier maintenance | 16 |
| 11 | Packing List | 17 |
| 12. | Reorder List | 18 |
| 13. | FAQ's | 19 |

Overview

The Olfactory Detector Outlet (ODO II) transfers the flow from a capillary column to a nose cone, where an analyst can smell the compounds that exit the capillary column. This allows identification of compounds by odor making the detector very useful for flavor and fragrance analysis.

The ODO II is a complete redesign of the olfactory detector concept and exhibits many advantages over existing models. It has a flexible heated transfer line, electronically controlled humidifier and a column flow splitter that is specifically designed to be compatible with mass spectrometers.

The ODO II consists of:

- A control module that regulates the transfer line heater, humidifier and make-up gas.
- A transfer line and nose cone that direct the flow from the capillary column.
- A column flow splitter with make-up gas inlet.

CAUTION

The ODO II requires connection of both auxiliary make up gas and humidifier air in order to function correctly. Please ensure the instructions are followed carefully.

The latest version of this instruction manual can be downloaded from the SGE website in PDF format.

Visit: www.sge.com/instructions

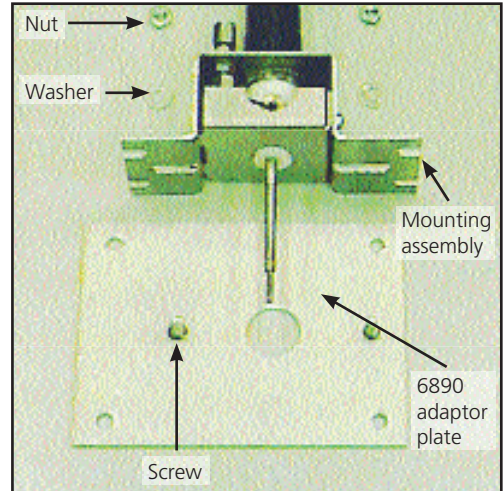
Installation

1 Installation of the transfer line

1.1 Mounting the transfer line on a HP/Agilent 6890 GC

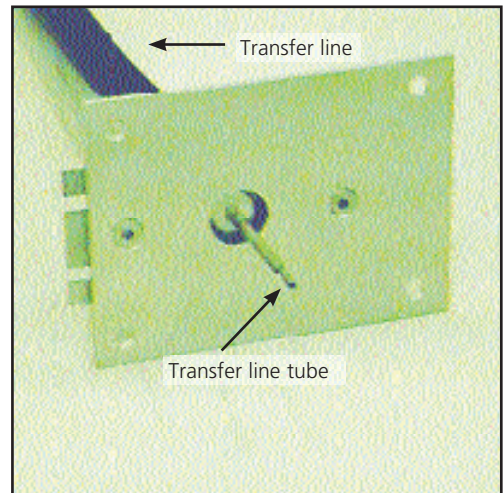
- A special 6890 adaptor plate (3) is provided for installation. This plate must be attached to the heated transfer line (2) before it can be securely attached to the 6890 GC.

screws, nuts, washers and 6890 adaptor plate



- Attach the 6890 adaptor plate to the transfer line assembly observing the order of washers, nuts and screws.

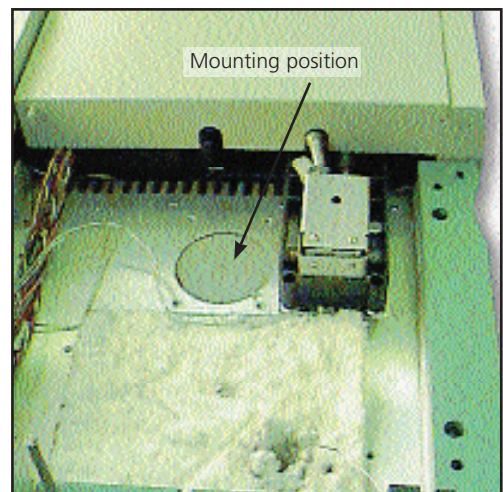
6890 mounting plate attached to the transfer line



- Remove the top cover of the GC.
- Locate the detector mounting well on the top of the 6890 instrument and remove any snap-out plates that may be covering the top of the well.

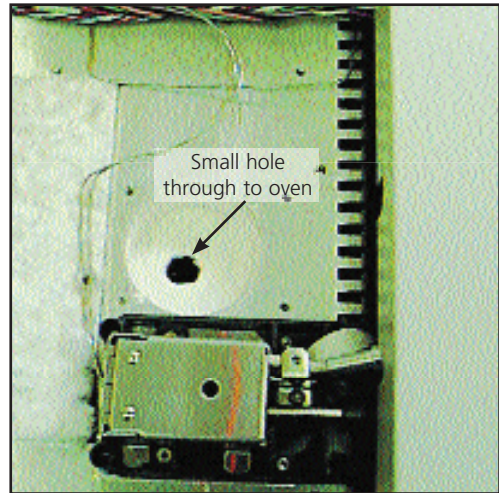
NB. The ODO II transfer line can be mounted in the front or back detector position. This example shows it mounted in the back detector position.

Mounting position



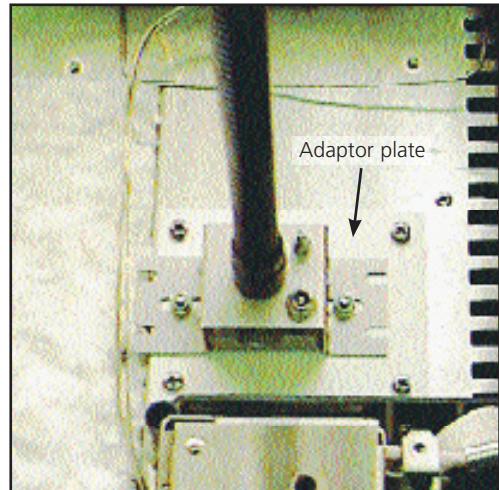
6890 insulation with a small hole through to the oven

- Remove the soft insulation from under the snapout plate. Below it is another layer of insulation that is attached to the oven wall, remove a section leaving a small hole through to the oven.



Transfer line and adaptor plate on the 6890

- Replace the soft insulation leaving a hole through the center that leads into the oven. Slide the transfer line tube through the oven wall until the adaptor plate rests on the top of the GC.
- Align the holes in the 6890 adaptor plate with the screw holes on the GC and secure with mounting screws.

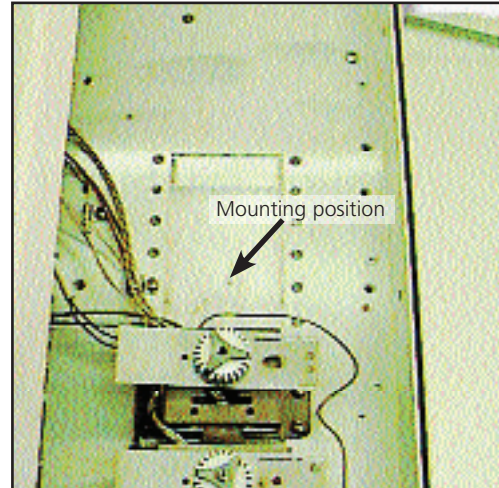


Go to page 8

1.2 Mounting the transfer line on a Varian 3800/3380 GC

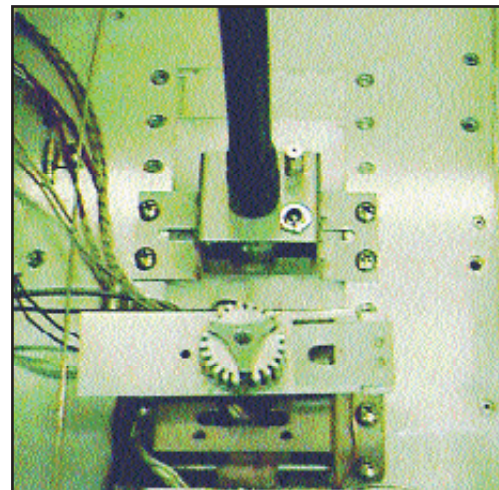
- Remove the top cover of the GC.
- The ODO II transfer line (2) is attached to an aluminum plate that has alignment holes to suit the injection port mounting well on a Varian® 3800/3380 GC. Locate the area on top of the GC and remove any snap-out plates that may be covering the top of the well.
- Push a small hole through the center of the insulation so the transfer line tube can slide through the oven roof.

Mounting position on a Varian 3800



- Slide the transfer line tube through the oven wall until the instrument mounting plate rests on the top of the GC.
- Align the holes in the instrument mounting plate with the screw holes on the GC and secure with the mounting screws.

Transfer line and mounting plate on the 3800

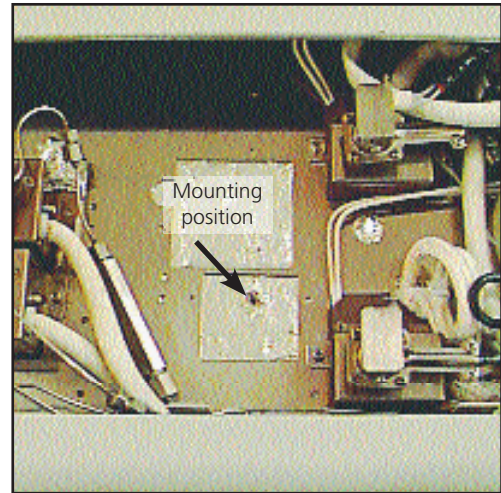


Go to page 8

1.3 Mounting the transfer line on a Shimadzu 17A GC

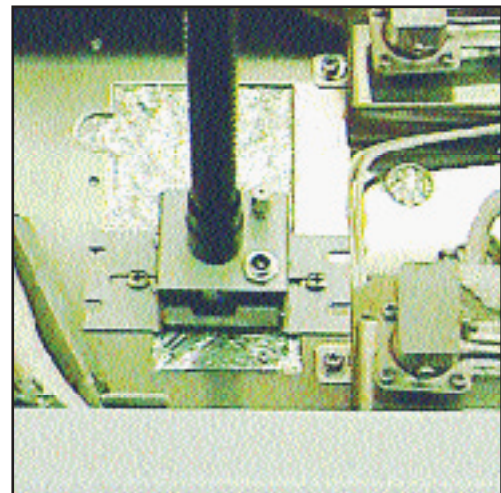
- Remove the top cover of the GC.
- Locate the heated transfer line (②) mounting position (between the front injector and detector) on the top of the 17A. Remove any snap-out plates that may be covering the top of the well.
- Push a small hole through the center of the insulation so the transfer line tube can slide through the oven roof.

Mounting position on a Shimadzu 17A



- Slide the transfer line tube through the oven roof until the instrument mounting plate rests on the top of the GC.
- Align the holes in the instrument mounting plate with the screw holes on the GC and secure with the mounting screws.

Transfer line and mounting plate on the 17A

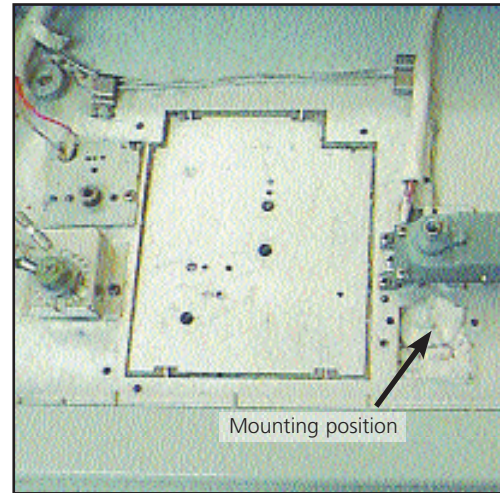


Go to page 8

1.4 Mounting the transfer line on a HP 5890 GC

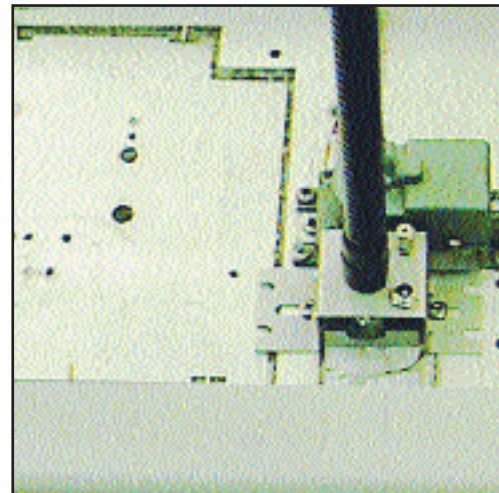
- Remove the top cover of GC.
- The ODO II heated transfer line (②) is attached to an aluminum plate that has alignment holes to suit the detector mounting well of a HP5890. Locate the area on the GC and remove any snap-out plates that may be covering the top of the well.
- Push a small hole through the center of the insulation so the transfer line tube can slide through the oven roof.

Mounting position on a HP 5890



- Slide the transfer line tube through the oven roof until the instrument mounting plate rests on the top of the GC.
- Align the holes in the instrument mounting plate with the screw holes on the GC and secure with the mounting screws.

Transfer line and mounting plate on the HP 5890

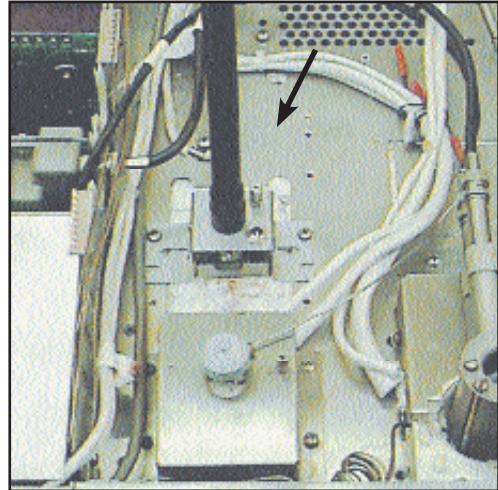


Go to page 8

1.5 Mounting the Transfer Line on other GC types

The ODO II heated transfer line (2) can be installed on Gas Chromatographs that are not specifically listed in this instruction manual. If your GC does not appear in this manual, use the following guidelines to mount the transfer line on your instrument.

ODO II transfer line mounted on a Varian® 3410




- Follow section 1.4 in the manual and check if there is anywhere on the top of the instrument where the transfer line can be installed. Look for a hole through the top of the oven wall that will allow the transfer line to protrude into the oven. Position the slots on the transfer line mounting assembly with the screw holes on the top of the GC. Use as many of the existing slots on the mounting assembly as possible to make the transfer line stable.

- If the slots on the transfer line heater do not line up with the screw holes on the top of the GC oven, attach the 6890 adaptor plate and check to see if the plate matches any screw holes on the GC.
- If there is still no match with the adaptor plate and mounting holes on the GC, the 6890 adaptor plate can be drilled to match the screw holes on the top of the GC.

Go to page 8

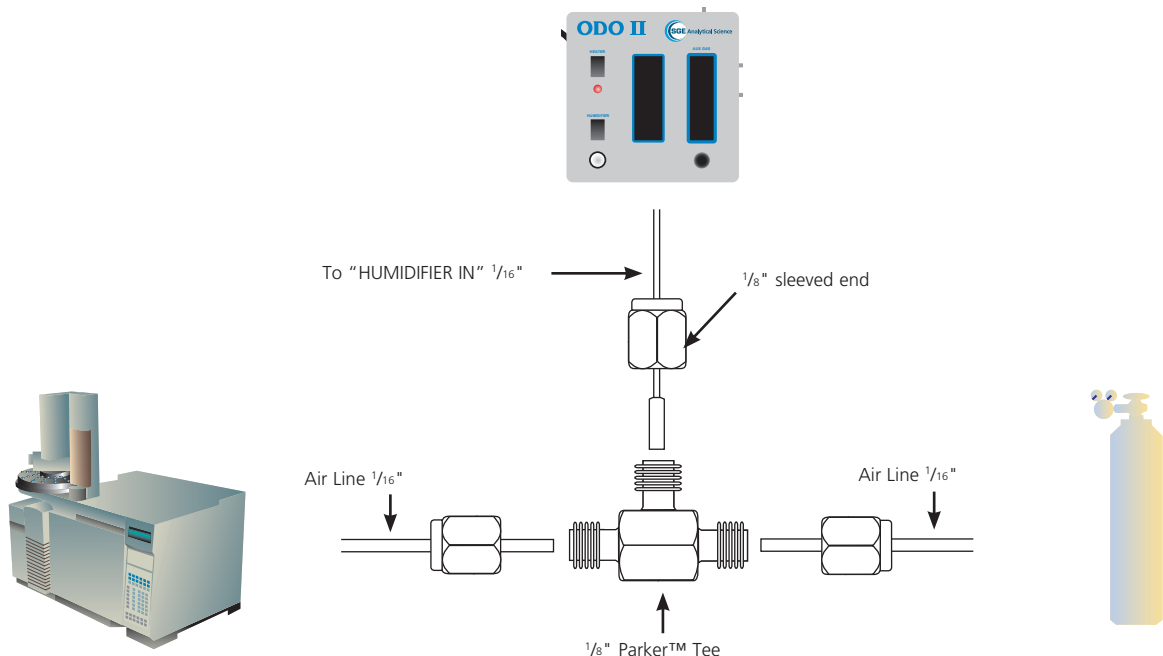
2 Connecting instrument grade AIR to the ODO II control module

- Instrument grade air is required for the operation of humidifier (8) in the control module.

| | |
|---|---|
|  | WARNING DO NOT connect any other gases except instrument grade air to the "HUMIDIFIER IN" connection of the control module. |
|---|---|

- Ensure the instrument grade air is turned off.
- De-pressurize the line until the pressure gauge on the cylinder reads zero.
- Locate the 1/8" tubing that supplies the compressed air and cut it with an appropriate tube cutter. (1/8" tubing cutter 082782).
- Connect the 1/8" Parker™ tee to the air line and attach the 1/8" sleeved end of the 1/16" stainless steel tubing (10) to the sidearm of the tee, as shown in Figure 1.

Figure 1 - Connecting the instrument grade AIR to the Parker™ tee

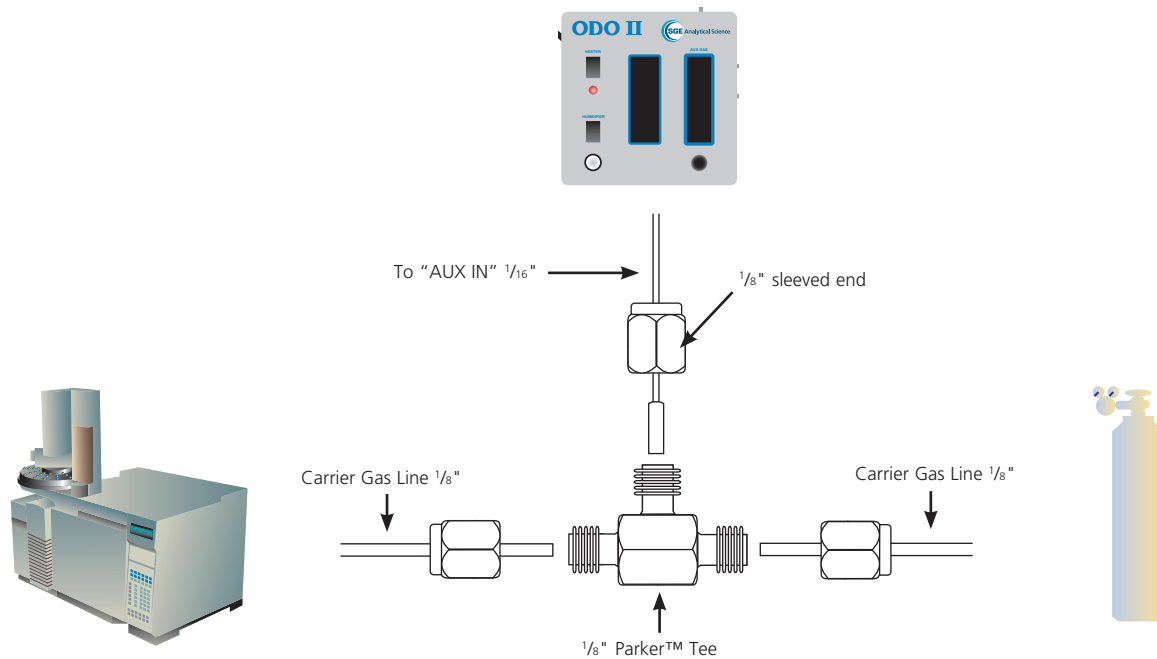


- Place the ODO II control module on the top of the GC (or somewhere safe) and within reach of the compressed air line (1m).
- Connect the other end of the 1/16" stainless steel tubing to the "HUMIDIFIER IN" port on the ODO II control module with the nut and graphite/Vespel® sealing ring (VSR-16) provided.
- **Turn on the compressed air and slowly re-pressurize the line to 60psi (range 40 - 100psi).**
- Check for leaks around the tee piece and connections to the control module.

3 Connecting AUXILIARY GAS to the ODO II control module

- Turn off the carrier gas cylinder that supplies the carrier gas to the GC.
- De-pressurize the line until the pressure gauge on the cylinder reads zero.
- Locate the 1/8" tubing that supplies the carrier gas to the GC and cut it with an appropriate tube cutter (P/N. 082782).
- Connect the 1/8" Parker™ tee to the carrier gas line and attach the 1/8" sleeved end of the 1/16" stainless steel (⑩) tubing to the sidearm of the tee, as shown in Figure 2.

Figure 2 - Connecting the Auxiliary gas to the Parker™ tee



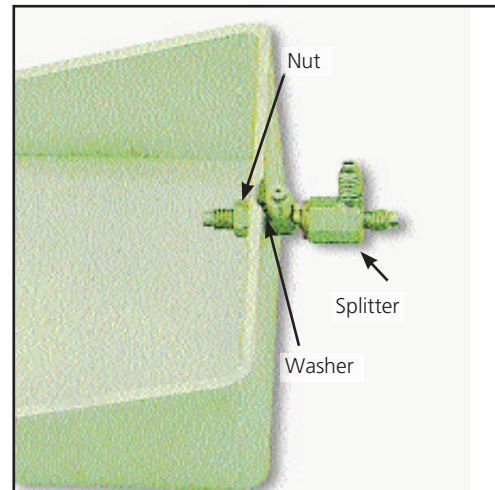
- Connect the other end of the 1/16" stainless steel tubing to the "AUX IN" port on the ODO II control module with the nut and graphite/Vespel® sealing ring (VSR-16) provided.
- Turn on the carrier gas cylinder and slowly re-pressurize the line.
- Check for leaks around the tee piece and connections to the control module.

4 Installing of and first connections to the column flow splitter

- Remove the column flow splitter (16) from its packaging and attach it to the splitter support bracket (17) with the nut and washer provided.
- Connect the 200mm x 1/16" stainless steel tube (12) the "AUX GAS OUT" connection on the ODO II control module.
- Connect the other end to the adsorption tube (13) provided in the kit.

NB. For both connections, use the sealing rings (GSR-16) provided.

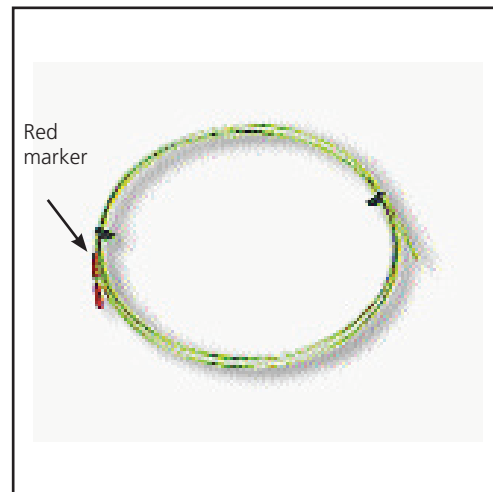
Splitter tee attached to the support bracket



- In the ODO II kit there is a 1/16" stainless steel tube with a red marker on one end. Connect the UNMARKED end (14) to the adsorption tube, with the nut and graphite sealing ring (GSR-16) provided.
- Find or make a hole in the GC oven roof, then feed the MARKED end (15) of the tube through this hole.

NB: Leave the red cap on the end of the tubing when doing so. It will help protect the tube from blocking with insulating material when it is passed through the oven wall.

1/16" Stainless steel tube with red marker



- Place the splitter support bracket on the oven floor, and attach the stainless steel tube to the side arm of the large tee with a SilTite™ 1/16" nut and ferrule provided. Make sure the tube is pushed in as far as it can go before tightening the nut. Take special note of the orientation of the ferrule as shown in Figure 3.
- Tighten the 1/16" nut finger tight and then turn 180° with a spanner.

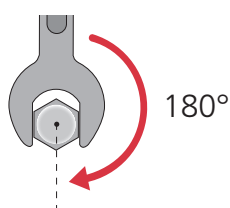
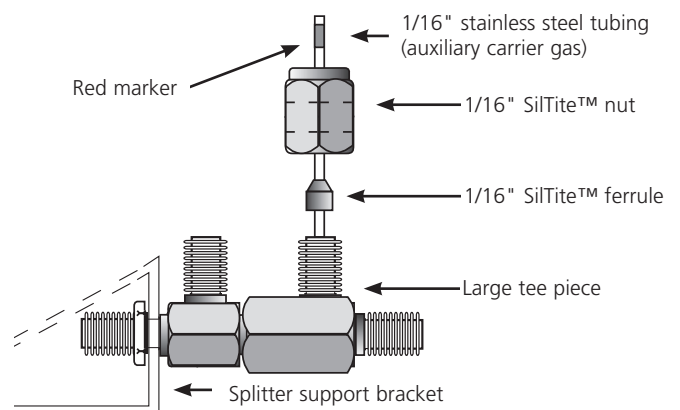


Figure 3 - Auxiliary Gas Line connections

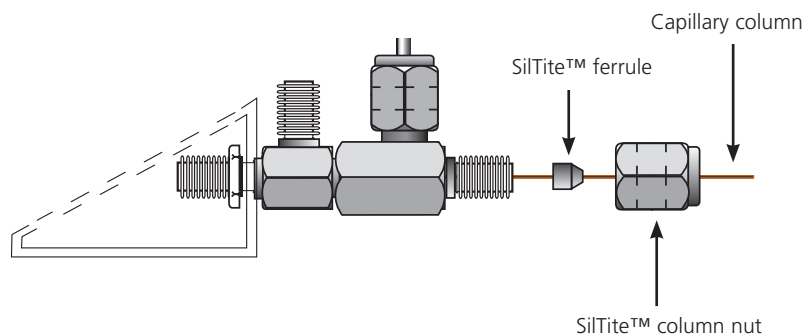


- Install the capillary column in the injection port (20) and turn the carrier gas pressure on.

NB: SGE recommends recutting the fused silica after it is passed through the ferrule. This ensures the tubing is free of any contamination that may have entered the column during handling and installation.

- Slide the SilTite™ nut and ferrule onto the outlet of the capillary column as shown in Figure 4. Be sure to take note of the orientation of the ferrule. Use the correct SilTite™ ferrule for your column diameter as labelled on the SilTite™ packet.
- If using a 0.25mm ID capillary column, insert the capillary column 10-11mm into the large tee, then slide the nut and ferrule onto the male thread.

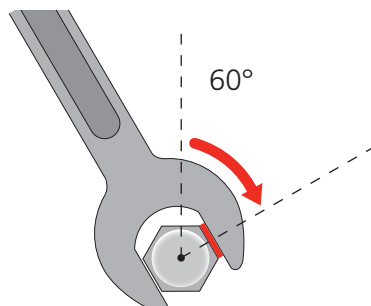
Figure 4 - Connecting the capillary column to the column flow splitter



- If using a 0.32mm capillary column, insert the capillary column into the large tee until the column cannot go any further. Pull the column back approximately 1 to 2mm, then slide the nut and ferrule onto the male thread.
- Finger tighten the nut then use a spanner to tighten it another 60°. See Figure 5.

NB: Over tightening may cause the capillary column to break.

Figure 5 - Tightening of the capillary column tubing nut



5 Connecting the transfer line to the ODO II control module

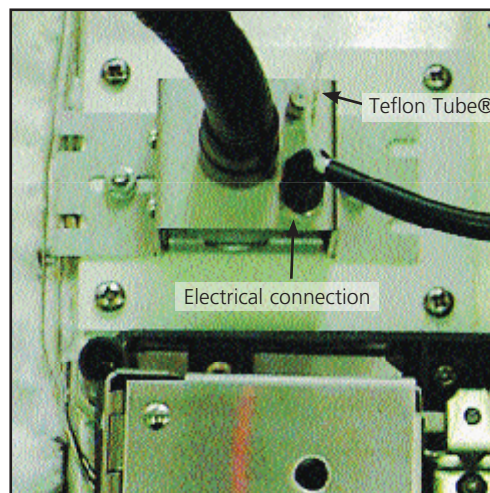
On the rear of the ODO II control module there is a long black cable (4) with an electrical connector and a Teflon® tube protruding from one end. This cable carries the humidified air to the nose cone and the current to the transfer line heater.

Transfer line cable connected to the top of the transfer line mounting assembly

- Plug the electrical connector on the ODO II transfer line cable into the plug on the top of the transfer line mounting assembly.
- Connect the Teflon® tube to the stainless steel union on the top of the transfer line mounting assembly with a 1/16" graphite sealing ring (GSR-16) provided in the kit.

CAUTION

DO NOT over tighten this connection as this may block the flow of humidified air.



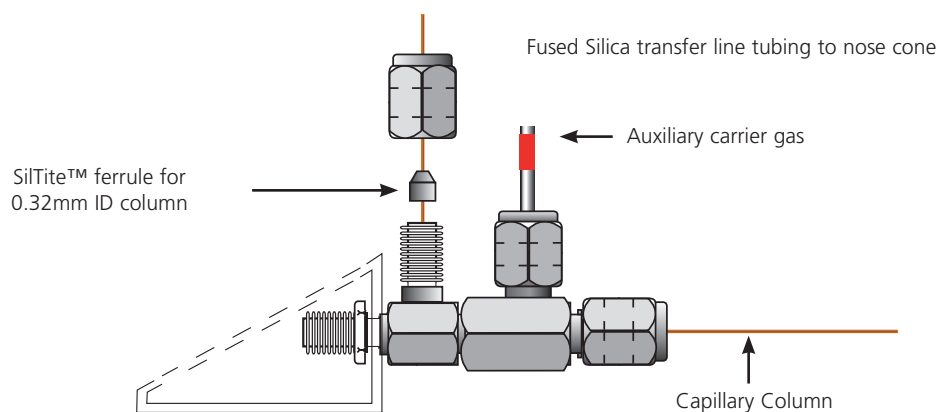
6 Connecting the column flow splitter to the transfer line

- The short piece of fused silica tubing that connects the heated transfer line (2) to the column flow splitter (16) is in a plastic bag labelled "ODO II – Transfer Line Tubing" (19). Remove one piece of tubing from the bag, straighten the transfer line and slowly thread the tubing down the small hole at the top of the transfer line until it reaches the inside of the oven.

NB: There may be some small resistance when threading the tubing through the transfer line but do not force tubing if it becomes stuck. If this happens, pull the tubing back a little before moving it forward again.

- Pull the tubing down from inside the oven until it reaches the column flow splitter.
- Slide a SilTite™ nut and ferrule (for 0.32mm ID columns) onto the transfer line tubing as shown in Figure 6. Be sure to take note of the orientation of the ferrule.

Figure 6 - Connecting the column flow splitter to the transfer line



- Place the end of the transfer line tubing onto the flat face of the sidearm on the column flow splitter and slide the nut and ferrule onto the male thread.

NB: The transfer line tubing does not go into the tee, it sits over the hole and is held by the ferrule.

- Finger tighten the nut then use a spanner to tighten it another 60°. See Figure 5.

NB: Over tightening may cause the transfer line tubing to break.

- Cut the other end of the transfer line tubing as close to the black face of the transfer line as possible. Slide the nose (1) cone onto the top of the heated transfer line (2) until it slips over the Viton® O-ring.

7 Connecting the column flow splitter to a GC detector

7.1 Connecting the column flow splitter to a Mass Spectrometer

There are two types of capillary tubing that connect the Mass Spectrometer to the column flow splitter 16. One piece is designed to connect the ODO II to a standard bench top MS and the other piece of tubing is used to connect the ODO II to high vacuum MS systems. One of these types of tubing should be chosen to connect the MS to the column flow splitter.

The capillary tubing labeled “ODO II - Standard MS Restrictor ” is for standard bench top MS systems like the Agilent 5973/N, 5971/72, Varian® 2100, 2200 and most Thermo Scientific models and Shimadzu MS systems with single high vacuum pumps.

The capillary tubing labeled “ODO II – Low vacuum MS restrictor” is for Mass Spectrometers with high powered pumping systems with dual turbo molecular pumps or equivalent dual stage pumps, like the Shimadzu 2010, Varian® 1200 and most TOF systems.

Choose the piece of capillary tubing that suits your MS type and slide a SilTite™ nut and ferrule (SilTite™ 0.4mm ID) onto it. See figure 7 for nut and ferrule orientation.

NB: This piece of fused silica tubing must not be shortened by more than 5cm (preferably not cut at all) as the length is calculated to balance the flow between the MS and Olfactory Detector Outlet.

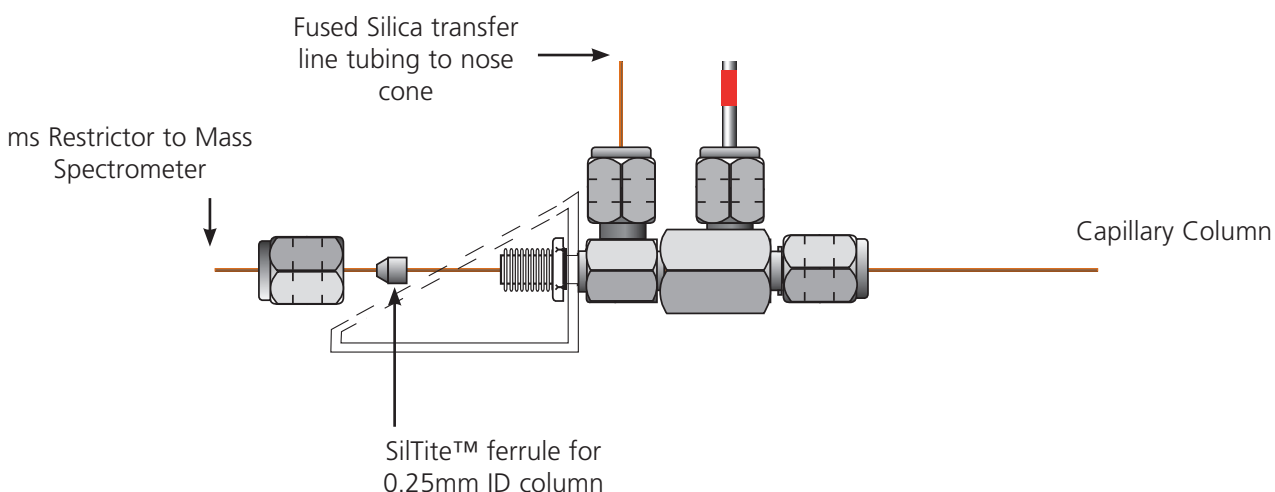
- Place the end of the tubing onto the flat face of the remaining arm on the column flow splitter and slide the SilTite™ nut and ferrule onto the male thread.
- Finger tighten the nut then use a spanner to tighten it another 60°. See Figure 5.

NB: Over tightening may cause the MS Restrictor to break.

- Connect the other end of the MS Restrictor to the Mass Spectrometer as described in the instrument operating instructions.

NB: The inlet pressure of your GC will need to be increased. This is to match retention times of compounds previously analyzed before the ODO II was installed.

Figure 7 - Connecting the MS Restrictor to a Mass Spectrometer



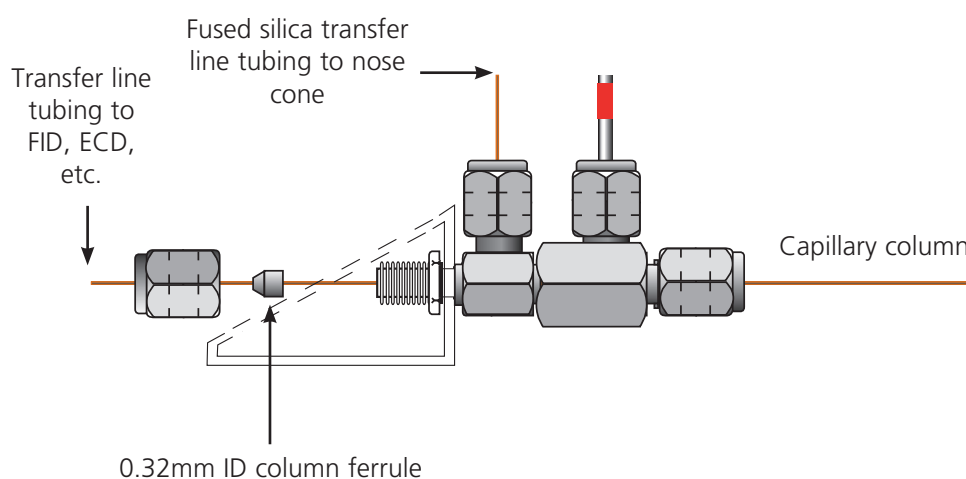
7.2 Connecting the column flow splitter to a detector at atmospheric pressure (FID, ECD etc)

- The fused silica tubing that connects the atmospheric detector to the column flow splitter is the same as that used to connect the transfer line to the splitter (19). Take the remaining piece of fused silica tubing from the bag labelled "ODO II – Transfer Line Tubing" and slide a SilTite™ nut and ferrule onto it. See Figure 8 for nut and ferrule orientation.
- Place the end of the transfer line tubing onto the flat face of the remaining arm on the column flow splitter and slide the nut and ferrule onto the male thread.
- Finger tighten the nut then use a spanner to tighten it another 60°. See Figure 5.

NB: Over tightening may cause the transfer line tubing to break.

- Connect the other end of the transfer line tubing to the GC detector as described in the instrument operating instructions.

Figure 8 - Connecting the transfer line tubing to a detector at atmospheric pressure



8 Filling the Humidifier

- Fill the 10mL TERUMO syringe with deionized water
- Insert the syringe into the humidifier filling port (7) and twist in a clockwise direction to lock it onto the ODO II control module.
- Inject water into the unit and remove the syringe.
- Repeat until the humidifier has reached it's maximum fill level.
- Turn the humidifier flow ON via the switch labeled "HUMIDIFIER" (6)
- Adjust the humidifier flow (via the knob on the back of the unit) until bubbles can be seen in the humidifier window, 200-300mL/min is adequate. Connect a flow meter to the "HUMIDIFIER OUT" if in doubt.

9 Before running a chromatogram

- Set the "AUX GAS" flow between 2 and 5 on the flow meter scale by adjusting the black knob (9) below the flow meter. This results in an auxiliary gas flow of about 10 to 15mL/min which balances the retention times between the two detectors.
- Turn the transfer line heater ON via the switch labelled "HEATER" (5). The red LED will light up to indicate that the heater is on. Wait 20 minutes for the heater to reach operating temperature before running a chromatogram.
- Installation of the ODO II is now complete. You are now ready to inject your sample and identify your components.

NB: The inlet pressure of your GC will need to be increased. This is to match retention times of compounds previously analyzed before the ODO II was installed.

10 Humidifier maintenance

- The humidifier must be periodically refilled for it to function correctly. It can be refilled with deionized or distilled water at any time whether it is ON or OFF and even during a run.
- The water in the humidifier should be completely drained and replaced at least once a week to keep it fresh. To drain the water, first place drain tube in waste container, turn the humidifier ON (5), then turn the drain switch ON (located on the rear panel). Water will quickly exit via the drain tube. Turn the drain switch off when the humidifier is empty. Refill before next use.

11 Packing List

| Description | Qty | Check |
|---|-----|--------------------------|
| ODO II Instructions | 1 | <input type="checkbox"/> |
| ④ - ⑨ ODO II control module | 1 | <input type="checkbox"/> |
| ② ODO II heated transfer line with mounting plate | 1 | <input type="checkbox"/> |
| ① Glass Nose Cone | 1 | <input type="checkbox"/> |
| ⑰ Splitter support bracket | 1 | <input type="checkbox"/> |
| Installation Kit: | | |
| ③ Mounting Plate, 6890 | 1 | <input type="checkbox"/> |
| Screw, M4 PAN HD | 4 | <input type="checkbox"/> |
| ⑩ - ⑪ 1/16" SS tube with 1/8" sleeve | 2 | <input type="checkbox"/> |
| Parker™ 1/8" tee | 2 | <input type="checkbox"/> |
| ⑭ - ⑮ 1/16" SS tube with restricted end (red marker) | 1 | <input type="checkbox"/> |
| ⑫ Tube, SS, 1/16" x 0.8mm (200mm long) | 1 | <input type="checkbox"/> |
| Vespel® Sealing Ring 1/16" (VSR 16-16) | 5 | <input type="checkbox"/> |
| Graphite Sealing Ring 1/16" (GSR 16-16) | 5 | <input type="checkbox"/> |
| ⑬ Adsorption tube (chemical trap, AT-PCS) | 1 | <input type="checkbox"/> |
| ⑯ Column Flow Splitter (including nuts) | 1 | <input type="checkbox"/> |
| ⑲ ODO II – Transfer Line Tubing 320/430 | 2 | <input type="checkbox"/> |
| ⑱ ODO II – Standard MS Restrictor 125/360 | 2 | <input type="checkbox"/> |
| ⑱ ODO II – Low Vacuum MS Restrictor 110/360 | 2 | <input type="checkbox"/> |
| Ferrule, SilTite™, 1/16" ID, pkt 5 (for 1/16" tubing) | 1 | <input type="checkbox"/> |
| Ferrule, SilTite™ 0.4mm ID, pkt 5 (for 0.25mm ID columns) | 1 | <input type="checkbox"/> |
| Ferrule, SilTite™ 0.5mm ID, pkt 5 (for 0.32mm ID columns) | 1 | <input type="checkbox"/> |
| Ferrule, SilTite™ 0.8mm ID, pkt 5 (for 0.53mm ID columns) | 1 | <input type="checkbox"/> |
| Nut, Column, SilTite™, 0.8mm ID (spare) | 1 | <input type="checkbox"/> |
| Nut, SS, 1/16" (SSN-16) | 2 | <input type="checkbox"/> |
| 10mL TERUMO Syringe | 1 | <input type="checkbox"/> |
| Wrench 1/4" & 5/16" | 2 | <input type="checkbox"/> |
| Wrench 1/2" & 7/16" | 1 | <input type="checkbox"/> |
| Wrench M7 | 1 | <input type="checkbox"/> |
| Power Supply, 24V – 2A (power lead not supplied) | 1 | <input type="checkbox"/> |

12 Reorder List

| | |
|---|---------|
| SilTite™ Kit 10/32", for 1/16" | 073203 |
| SilTite™ Kit 10/32", for 0.25mm ID Columns | 073200 |
| SilTite™ Kit 10/32", for 0.32mm ID Columns | 073201 |
| SilTite™ Kit 10/32", for 0.53mm ID Columns | 073202 |
| SilTite™ Ferrules for 1/16" tubing (10 pkt) | 073223 |
| SilTite™ Ferrules for 0.25mm ID Column (10 pkt) | 073220 |
| SilTite™ Ferrules for 0.32mm ID Column (10 pkt) | 073221 |
| SilTite™ Ferrules for 0.53mm ID Column (10 pkt) | 073222 |
| 1/16" SS tube with 1/8" sleeve | 113421 |
| Vespel® Sealing Ring 1/16" (10 pkt) | 072653 |
| Graphite Sealing Ring 1/16" (10 pkt) | 0726520 |
| ODO II – Transfer Line Tubing | 093514 |
| Adsorption tube (chemical trap), AT-PCS | 103489 |
| ODO II - Glass Nose Cone | 093513 |
| Column Flow Splitter | 093516 |
| 1/16" SS tube with restricted end (red marker) | 113417 |
| ODO II – Standard MS Restrictor | 093517 |
| ODO II – Low Vacuum MS Restrictor | 093518 |

13 FAQ's

Q. Does the ODO II use a universal power supply? Can it be used in my country?

A. The control box runs off a universal power supply - 110 to 240V, which is provided, the only thing that is needed is the cable that connects to the power supply and plugs into your mains power outlet. It's a standard computer power cable that is available where all computers are sold and will be different in every country.

Q. Are there any extra gases that are needed to operate the ODO II?

A. Two gases are needed to operate the ODO II, compressed air for the humidifier and whatever carrier gas you are using (He?) for the makeup gas. Some labs may only have a GC-MS so do not have any need for compressed air, but it's a good idea to get a bottle for the ODO II because the humidifier uses air & water to stop your nose from drying out if you're doing a lot of sniffing.

Q. Is the ODO II compatible with my GC?

A. The ODO II comes supplied with all the hardware needed to mount the transfer line/nose cone to your instrument. There is one general mounting plate to suit HP5890, Varian® CP-3800/3380 and Shimadzu 17A and there is another for Agilent 6890s. Screw holes to suit Finnigan GC's will also be included on one of these two plates. When ordering an ODO II it is not essential to notify SGE of your instrument type, unless you think it is not included on the above list.

Q. Is the ODO II compatible with my MS?

A. The ODO II is compatible with all MS models because it doesn't connect directly to the MS. A piece of fused silica capillary connects the ODO II to the MS so you just use whatever nut and ferrule that you normally use to connect columns to the MS.

Q. If I connect my ODO II to my MS, will the MS suck air in through the olfactory detector?

A. The column splitter in the ODO II is specifically designed to split the flow to an MS (it's probably the most common application). Air does not get sucked back into the MS for two main reasons:

1. The capillary tubing that is used to transfer the flow to each detector is a specific length and internal diameter that has been calculated to give equal flow to both detectors. The difference between the two pieces of tubing compensates for the different pressure drop between both detectors and the splitter tee.
2. The tee inserts extra carrier gas at the point where the column flow is split. Most of this carrier gas flows to the olfactory detector and is used to increase the speed of the flow to the nose cone. By adding carrier gas we ensure that the pressure in the tee will always remain positive (above 1 atmosphere) due to the flow structure of the ODO II control unit. The flow to the ODO II cannot change direction and flow towards the MS unless the pressure in the tee is negative (below 1 atmosphere) so the positive pressure prevents any air being sucked into the MS.

Q. Is the ODO II easy to install? Could I do it myself?

A. There are three parts to the ODO II that have to be installed:

1. The control box. Air and helium plug into the back of the unit via 1/16" tubing (supplied) that connects to the gas lines behind GC. It's the easiest part to install and can be placed anywhere within reach of the instrument, gas lines and power outlet.

2. The transfer line and nose cone. Two or four screws connect the base plate (mount) to the instrument depending on your instrument type. The holes in the plate are designed to line up with the screw holes surrounding the detector mounting wells on the GC. You may have to remove some insulation in the well and/or a small snap-out plate. NB: If you are installing the ODO II on a GC that has an MS, it is highly unlikely that existing detectors will use up all the detector wells. But if that is the case (ie. An MS and at least two atmospheric detectors), one of the atmospheric detectors will have to be removed.
3. The tee piece that splits the column flow between the two detectors. The tee piece is mounted on a stand that sits on the floor of the GC oven. It is connected to the AUX GAS outlet of the ODO II control module with 1/16" tubing (supplied).

Q. How much would it cost to get the ODO II installed by an engineer on my machine?

A. Contact your local SGE office or distributor and ask whether installation is available in your country and how much it will cost.

Q. Can I use the ODO II with an ms NoVent?

A. The ODO II can be used simultaneously with the ms NoVent as long as the "ODO II - MS Restrictor " is not connected to the ms NoVent tee piece. The ms NoVent tee piece already contains an MS Restrictor that can be used for the same purpose.

When connecting the ODO II column flow splitter to the ms NoVent tee, a standard piece of capillary column should be used instead of the "ODO II - MS Restrictor ". The best solution is to cut a short piece off the end of your capillary column and use it to connect the ms NoVent tee to the column flow splitter.

For any updates to this manual, visit www.sge.com



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