

TRACE 1300/1310: Gas Sampling Valve Backflush System Connection

This guide provides instructions for connecting your Gas Sampling Valve module with precolumn and analytical capillary column into the oven of the TRACE 1300/1310 GC. Refer to the chapters Gas Sampling Valve (GSV) Module in the *TRACE 1300/TRACE 1310 User Guide*.

The Gas Sampling Valve backflush system is provided with the kit PN 19050764.

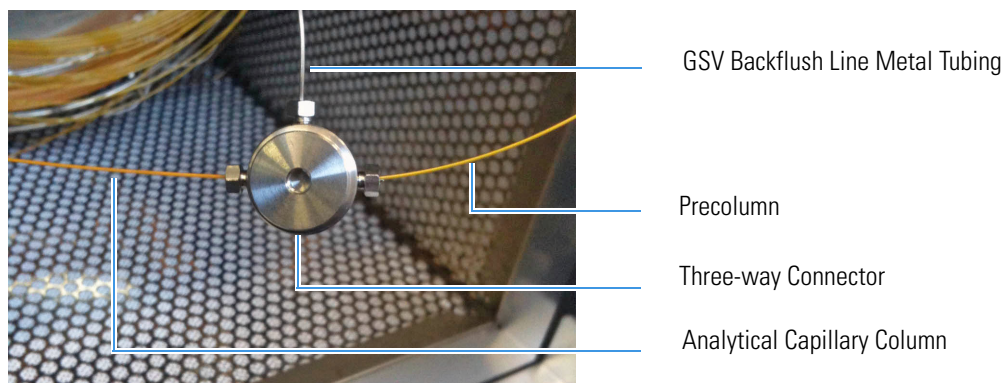
❖ To connect backflush line, precolumn, and analytical capillary column



CAUTION Before starting make sure the Gas Sampling Valve (GSV) module is correctly installed into its seat.

The result of this operation is schematically shown in the example of [Figure 368](#).

Figure 1. Connecting GSV Backflush Line, Precolumn, and Analytical Capillary Column



Note Could be necessary to adjust the position of the three-way connector when installing backflush line, precolumn, and capillary column to stress as minimal as possible.

When the GSV module is inserted into its position on the upper deck of the GC, the backflush line metal tubing protrudes into the GC oven.

1. Open the front door of the GC.
2. Remove nut and ferrule from the metal tubing of the GSV module.
3. Connect the backflush line metal tubing coming from the bottom of the Gas Sampling Valve module to the three-way connector.
 - a. Slide the 1/32-in. nut and the Vespel/Graphite ferrule PN 29003428 onto the end of the backflush line with the bevelled end facing towards the three-way connector.
 - b. Insert the backflush line into the central position of the three-way connector.
 - c. Slide the retaining nut onto the backflush line through its side cut.

- d. Use the 5 mm wrench to tighten the retaining nut. Use enough pressure necessary to obtain a good seal without overtighten.
4. Connect the precolumn to the Tee connector.
 - a. Place the precolumn on the column support.
 - b. Slide the 1/32-in. nut and the proper Vespel/Graphite ferrule onto the precolumn with the bevelled end facing towards the three-way connector. Always use a new ferrule of the correct diameter.
 - c. Cut 1 cm from the precolumn end.
 - d. Insert the precolumn in one of the two external positions of the three-way connector.
 - e. Finger-tighten the precolumn retaining nut until it starts to grip the precolumn.
 - f. Use the 5 mm wrench to tighten the retaining nut. Use enough pressure necessary to obtain a good seal without overtighten.
5. Connect the precolumn to the injector base.
 - a. Slide the M6 nut and the graphite ferrule onto the fused silica precolumn with the bevelled end facing towards the injector.
 - b. Cut 1 cm from the precolumn.
 - c. Insert the precolumn into the injector and slide the ferrule up to the injector base. Insert the precolumn till it reaches the mechanical stop, than drawn it back of 1 mm.
 - d. Finger-tighten the precolumn retaining nut until it starts to grip the precolumn.
 - e. Use the 1/4-in. wrench to tighten the retaining nut. Use enough pressure necessary to obtain a good seal without overtighten.
6. Connect the capillary column to the three-way connector.
 - a. Place the capillary column on the column support.
 - b. Slide the 1/32-in. nut and the proper Vespel/Graphite ferrule onto the capillary column with the bevelled end facing towards the three-way connector.
 - c. Cut 1 cm from the end of the capillary column.
 - d. Insert the end of the capillary column in the free position of the three-way connector.
 - e. Finger-tighten the column retaining nut until it starts to grip the column.
 - f. Use the 5 mm wrench to tighten the retaining nut. Use enough pressure necessary to obtain a good seal.
7. Connect the capillary column to the detector base.
 - a. Slide the nut and the graphite ferrule onto the capillary column with the bevelled end facing the detector base.
 - b. Be careful to avoid damaging the graphite ferrule when inserting the capillary column.
 - c. Cut 2–3 cm from the end of the capillary column.
 - d. Insert the capillary column into the detector base body and slide the ferrule up to the detector base.
 - e. Finger-tighten the capillary column retaining nut until it starts to grip the column.

-
- f. Push the capillary column through the detector base according to the detector in use.
 - g. Use the 1/4-in. wrench to tighten the retaining nut.
 - h. Use enough pressure necessary to obtain a good seal without overtighten.