Agilent Stream Splitters

Installation and Configuration

Intended Use of the Stream Splitters

Agilent Stream Splitters are designed for preparative HPLC applications with flow rates above 1200 mL/min to split stream between preparative HPLC detector and an analytical detector. PCG426000001 is designed for flow rates up to 200 mL/min. It uses 1/16 inch connection fittings (PTFE tubing). PCG426000002 is designed for higher flow rates up to 1200 mL/min. It uses 1/8 inch and 1/16 inch connection fittings (PTFE tubing), depending on the detector being used.

Some tubings and fittings are supplied to connect with both preparative and analytical flow cells as required. Please use appropriate fittings based on the detectors being used.

The Stream Splitter divides the mobile phase from a column among two different detectors (or other flow paths).

Delivery Checklist

- Stream Splitter
- PTFE tubing 1/16 inch for the PCG426000001
- PTFE tubing 1/8 inch and 1/16 inch for the PCG426000002

Physical Layout

The split ratio is determined by manually adjusting the needle valve, which is located in the center of the front panel.

Figure 1 Stream splitter for preparative HPLC system – front view

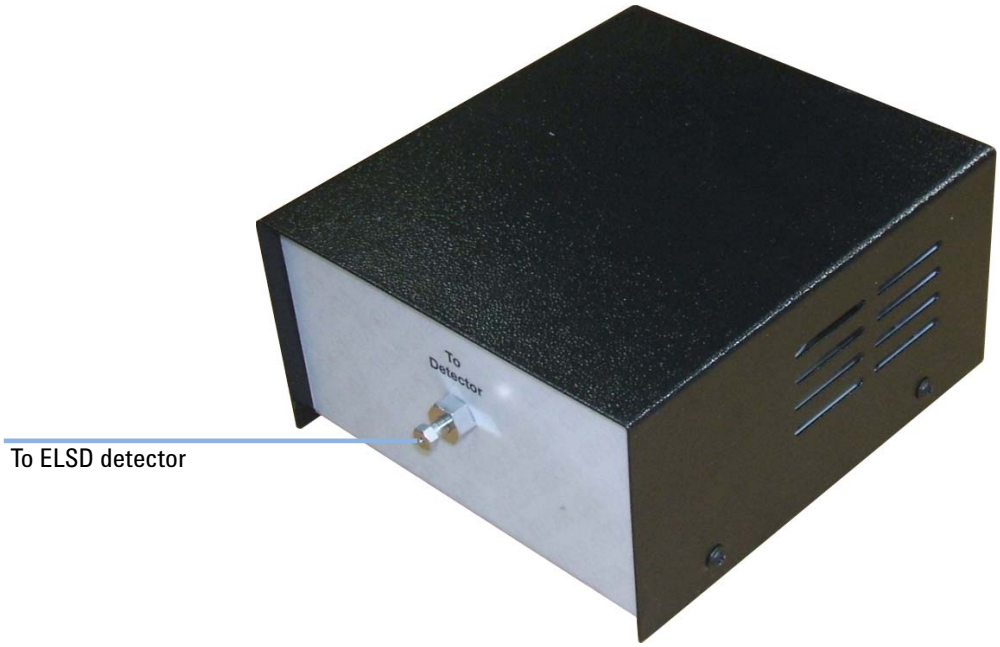

Figure 2 Stream splitter for preparative HPLC system – rear view

Metering Valve Specifications

Working pressure	Up to 137 bar (2000 psig)
Temperature	-23 – 204 °C (-10 – 400 F)
Body material	316 stainless steel
Flow coefficient	0.004 – 0.16
End connections	Swagelok tube fitting
Size	1.59 mm (1/16 inch)
Stem O-ring material	FFKM

Installation of the Stream Splitter

1. Install the stream splitter as close as possible to the outlet of the UV detector, the inlet of the ELSD and the fraction collector.
2. Cut the appropriate lengths of the chosen diameter tubing.
3. Install outlet from the UV detector to the IN port on the stream splitter.
4. Connect the OUT port on the stream splitter to the fraction collector.
5. Connect To Detector port in the back of stream splitter to the ELSD detector.

Operation

Use with ELSD detector

The stream splitters are designed for manual control of the flow split from the UV detector to the fraction collector and the ELSD detector. In reference to the diagram below if the metering valve is closed off all the flow passing into the inlet is directed to the outlet via the backpressure regulator.

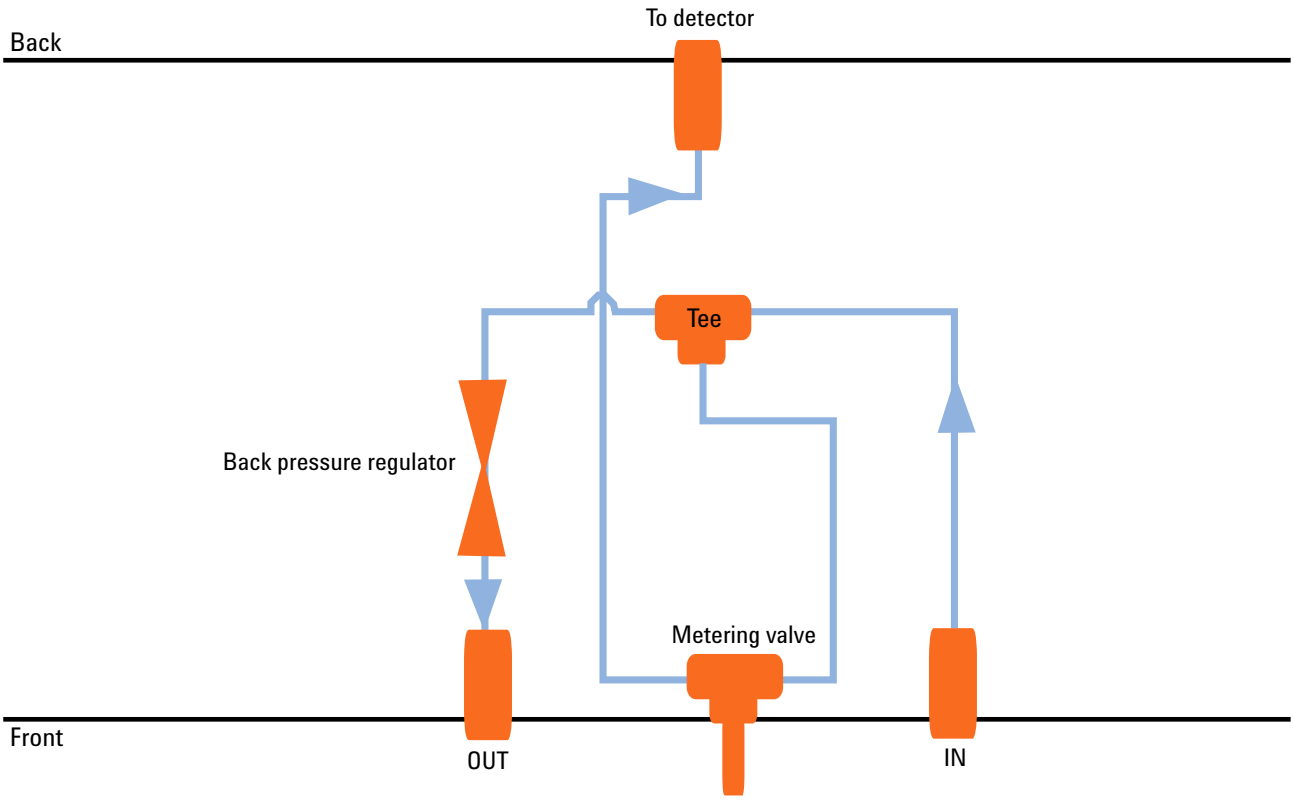

Figure 3 Operation diagram of the stream splitter

1 Before you turn on the system, make sure the metering valve is set to **Off**.

   All the flow will be directed to the outlet via the backpressure regulator.

2 Carefully open the metering valve to balance the flow that is directed to the secondary circuit.

Configuring the Split Ratio

The flow into the ELSD detector must be checked visually or by using a flow meter, and it is recommended that the balance of flow is initially set with a flow rate of 1 mL/min into the ELSD and make further adjustments from there if required. However, please ensure that the flow rate into the ELSD is kept below 5 mL/min.

NOTE

Please be aware that the split ratio will change with flow rate, column size and solvent viscosity, therefore re-adjustment of the flow going into the ELSD will be required. This is particularly important if running at very low flow rates (<18 mL/min), and when using very viscous solvents (that is isopropanol, DCM, and so forth) to ensure that flow is still passing into the ELSD.

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