

SilFlow™ GC Capillary Column 3- or 4-port Splitter Installation Instructions

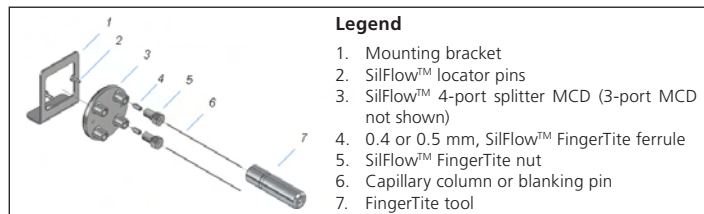
INSTALLATION INSTRUCTIONS

Congratulations! You have purchased the latest innovation in GC capillary column connections by SGE Analytical Science. The low dead volume SilFlow™ GC capillary column 3 or 4-port splitter system enables you to install and remove a column without using a wrench; giving you flexibility in the GC irrespective of your configuration.

KIT CONTENTS

- 1 x SilFlow™ 3- or 4-port splitter MicroChannel Device (MCD)
- 5 x SilFlow™ FingerTite nuts
- 10 x 0.4 mm, SilFlow™ FingerTite ferrules
- 10 x 0.5 mm, SilFlow™ FingerTite ferrules
- 1 x FingerTite tool
- 1 x mounting bracket
- 5 x blanking pins
- SilFlow™ FingerTite 0.4 mm Jig
- SilFlow™ FingerTite 0.5mm Jig

Column Splitter Installation



Legend

1. Mounting bracket
2. SilFlow™ locator pins
3. SilFlow™ 4-port splitter MCD (3-port MCD not shown)
4. 0.4 or 0.5 mm, SilFlow™ FingerTite ferrule
5. SilFlow™ FingerTite nut
6. Capillary column or blanking pin
7. FingerTite tool

Figure 1. Exploded diagram of the SilFlow™ 4-port splitter.

1. Attach the mounting bracket (1) to a suitable point in the GC Oven – ensure the locator pins (2) can be easily accessed to install the SilFlow™ MCD.

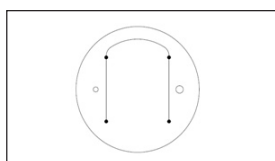


Figure 2a. Schematic of 4 port splitter channel design.

2. Locate the SilFlow™ MCD (3) and identify the appropriate port location suitable for the GC capillary column connection (see Figure 2a and b – the port dimensions are located on the back of the MCD).

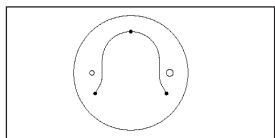
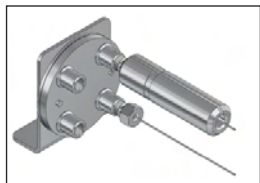
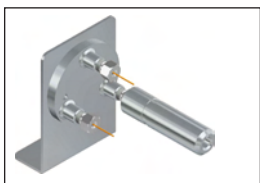


Figure 2b. Schematic of 3 port splitter channel design.



4 port splitter.

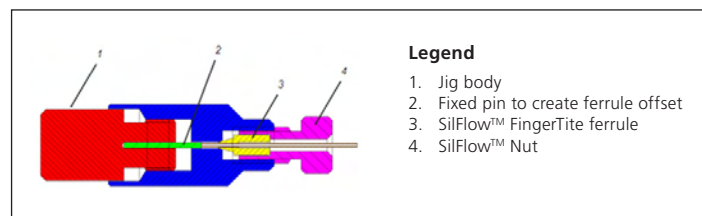


3 port splitter.

3. Locate the appropriate SilFlow™ FingerTite ferrule (4) (0.4 mm for 0.36 OD capillaries or 0.5 mm for 0.43 OD capillaries), SilFlow™ nut (5), capillary or blanking line (6) and FingerTite tool (7).

ASSEMBLY WITH SILFLOW™ FINGERTITE JIG

The SilFlow™ FingerTite Jig is designed to pre-swage the ferrule for SilFlow™ devices outside of the oven. Preswaging the ferrule enables you to use the connection onto any SilFlow™ port suitable for the OD of the fused silica capillary and ensures the capillary will not be crushed onto the SilFlow™ channels.



Legend

1. Jig body
2. Fixed pin to create ferrule offset
3. SilFlow™ FingerTite ferrule
4. SilFlow™ Nut

Figure 3. Exploded diagram of the 0.4 mm SilFlow™ FingerTite Jig.

There are two Jigs; one for the 0.4mm ID ferrules (for 0.36 OD capillaries) and one for the 0.5mm ID ferrules (for 0.43 OD capillaries). The Jigs have a fixed depth resulting from the pin being fixed in the body of the Jig (Figure 3, item 2).

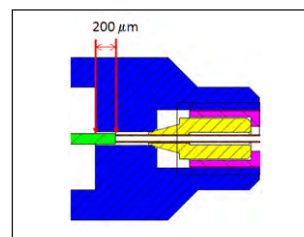


Figure 4. Section view of the first stage of swaging the male end fitting onto the double taper ferrule.

When the ferrule is tightened into the Jig using the FingerTite Tool, (never use a wrench to tighten FingerTite ferrules), the ferrule is fixed on a position of the fused silica capillary that ensures it is offset from the SilFlow™ multi channel device by ~ 200 micron (see Figure 4).

4. Once all the capillaries are connected, mount the SilFlow™ MCD on the bracket (if it is not already mounted).

For application configuration suggestions visit: www.sge.com/silflow.

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