

Introduction

Union kit GCUT1/20 has been specifically designed for chromatographers wanting to produce their own capillary systems.

These unions have a reduced bore at one end. The capillary should be connected at the reduced bore end and the 1/16" OD line at the other.

Three lengths of GLT™ are supplied with the unions from which suitable lengths should be selected.

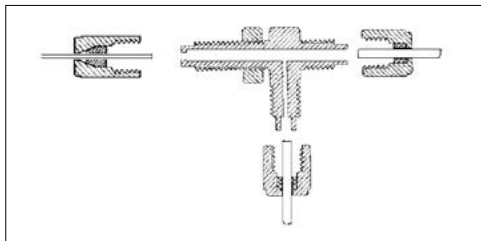
It is recommended that the GLT connecting line to the injector be kept as short as practicable and also be 0.3 mm ID particularly for WCOT columns.

GCUT1/20

Consists of two unions specifically designed for connecting a glass capillary column up to 1 mm OD (drill out for larger tubing) to 1/16" OD GLT. Three lengths of 1/16" GLT are supplied: 1 x 20 cm x 0.4 mm, 1 x 10 cm x 0.4 mm, 1 x 20 cm x 0.3 mm, plus 5 x 1/16" GFF/16, 5 x 1 mm OGF/010 graphite ferrules.

Note: One of the unions has a make-up gas inlet.

Instructions



Method for connecting glass capillary columns and 1/16" OD GLT to low hold-up unions

1. Place onto the 1/16" line the nut and 1/16" ID graphite ferrule.
2. Slide the 1/16" line into the union until it touches the reduced bore at the other end of the union.

3. Finger tighten the nut then, using a spanner, further tighten by 2/3 to 1 turn.
4. Place onto the glass capillary the nut, and 1 mm ID graphite ferrule.
5. Place the glass capillary into the reduced bore of the union and finger tighten the nut assembly then, with a spanner, carefully tighten by a further 2/3 to 1 turn.
6. Connect a 1/16" stainless steel make-up gas line by repeating steps 1-3.

Practical tips

Glass lined tubing (GLT™)

1/16" OD GLT is supplied with union kit GCUT1/20 and principally for connecting the unions and capillary column to the injector or detector of the GC. The tubing can be heated, bent or soldered as detailed below.

1. Temperature: The tubing will withstand continuous use at temperatures up to 500°C and if desired can be electrically heated by applying a low voltage across the metal casing.
2. Bending: The tubing can be bent, without damage to the glass liner, by heating it with a Bunsen burner in the region where the bend is required. When the metal tubing turns medium red (approximately 800°C) it can be slowly bent to the desired angle while still in the flame.
3. Cutting: Ideally use a wet silicon carbide cut-off wheel. A simple, although less effective method, is to score a deep line around the GLT with a fine file, then snap the tubing. It should then be filed flat on the end, deburred, washed and dried, then flame polished by heating to a medium red.
4. Silver-soldering: After first removing the black oxide layer, the metal sheath can be silver-soldered to other components by conventional methods but it is important that excessive heat is not applied to the tubing. On completion of soldering, the components should not be quenched but allowed to cool slowly to ambient temperatures.
5. Low hold-up reducers: 1/8" to 1/16" and 1/4" to 1/16". Primarily designed for connecting 1/16" OD GLT to 1/8" or 1/4" detector connections. The reducers are supplied with graphite ferrules.

Glass capillary

Cutting: Scratch or score a small mark on the tubing then snap the glass away from the score mark. If necessary flame the ends to remove the sharp edges but avoid reducing the diameter of the column.

Important: To avoid possible dead volume problems, ensure both glass and 1/16" OD tubings have square cut ends.

Information and support

Visit www.trajanscimed.com or contact techsupport@trajanscimed.com

Specifications are subject to change without notice.