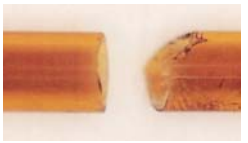
Press-Tight® Connectors: Overview



Make a clean, square cut for optimum connector performance. The cut on the right will produce a poor seal.

A brown ring indicates a proper seal.

For a secure, reliable connection, use a Vu2 Union™ Connector. See **page 222**.

Restek Press-Tight® Connectors

Press-Tight® connectors are lightweight, quickly installed, and easy to use. They connect fused silica tubing having outside diameters ranging from 0.33 to 0.74mm (Restek 0.1 to 0.53mm ID). Press-Tight® connectors do not cause solvent tailing, or adsorb active compounds. We have thoroughly investigated the taper angle and tolerances to ensure a leak-tight fit on every connector.

Press-Tight® connectors most often are used to connect a guard column to an analytical column. They also are used to connect columns differing in polarity, for unique separations, or to repair a broken column. Mass spectroscopists use Press-Tight® connectors for connecting analytical columns to smaller-diameter transfer lines.

How does a Press-Tight® connector work?

A Press-Tight® connector forms a leak-tight seal through concentric compressive forces as the tubing end is pushed into a tightly controlled radial restriction. These forces are strong enough to form a leak-tight seal under the normal pressures used in capillary GC. The seal is further strengthened as the polyimide resin coating on the exterior of the column bonds to the inner surface of the connector after several thermal cycles to 200°C.

Obtaining a leak-tight seal:

To achieve optimum performance from these connectors, begin with a properly cut fused silica column or retention gap end. Even if you use polyimide resin for extra insurance, a poorly cut capillary column will make an inadequate seal.

Press the cut ends into the connector, then establish a flow, and leak-check the seal with a Restek Electronic Leak Detector (cat.# 22451, page 207) before heating the system. The seal is made permanent as the polyimide resin coating on the column bonds to the inner surface of the connector after several thermal cycles to 200°C.

Can the connection be strengthened?

Absolutely. A curable polyimide resin (cat.# 20445, page 221) is available to create a strong, permanent seal. A Vu2 Union™ connector creates a secondary seal to ensure a leak-tight connection. However, clean, square cut ends and a good press-tight seal still must be made for the connection to be effective.

What is the maximum temperature for a Press-Tight® connector?

Press-Tight® connectors are effective at oven temperatures to 325°C, the temperature at which the polyimide coating on the column decomposes and the connection will begin to leak. We strongly recommend using a Vu2 Union™ (page 222) or SeCure™ "Y" Connector (page 223) connector if oven temperatures will exceed 325°C for prolonged periods of time.

Can Press-Tight® connectors be used with MXT® columns?

No. To achieve a leak-tight fused silica to stainless steel connection, we recommend an MXT™ connector (see page 226).

Let Restek make the guard column/transfer line connection for you!

We will connect a guard column/transfer line to any analytical column, using a Vu2 Union™ connector. We will leak-check the connection and confirm analytical integrity by analyzing a test mixture. To order a preconnected guard column/transfer line, add the three-digit suffix from the chart below to any analytical column catalog number. Example: A 5m, 0.32mm ID guard column connected to a 30m, 0.32mm ID, 1.0µm Rtx®-5 column is cat.# 10254-163.

5m Guard Column/Transfer Line ID	cat.# suffix	Additional Cost*
0.15mm	-160	
0.18mm	-161	
0.25mm	-162	
0.32mm	-163	
0.53mm	-164	

10m Guard Column/Transfer Line ID	cat.# suffix	Additional Cost*
0.25mm	-165	
0.32mm	-166	
0.53mm	-167	

*Additional cost will be added to the price of the column.

for **more** info

These guard columns are intermediate polarity (IP) deactivated.

For more information about guard columns and other deactivations, see **pages 26–30**.