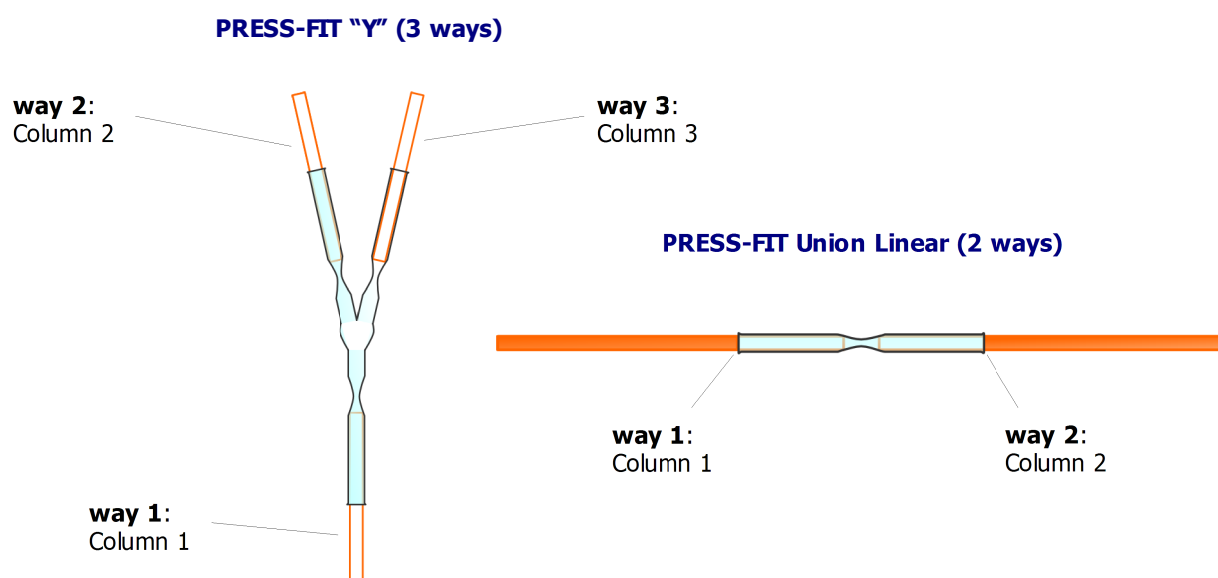


## Guide to use PRESS-FIT Connectors

### What are PRESS-FIT Connectors?

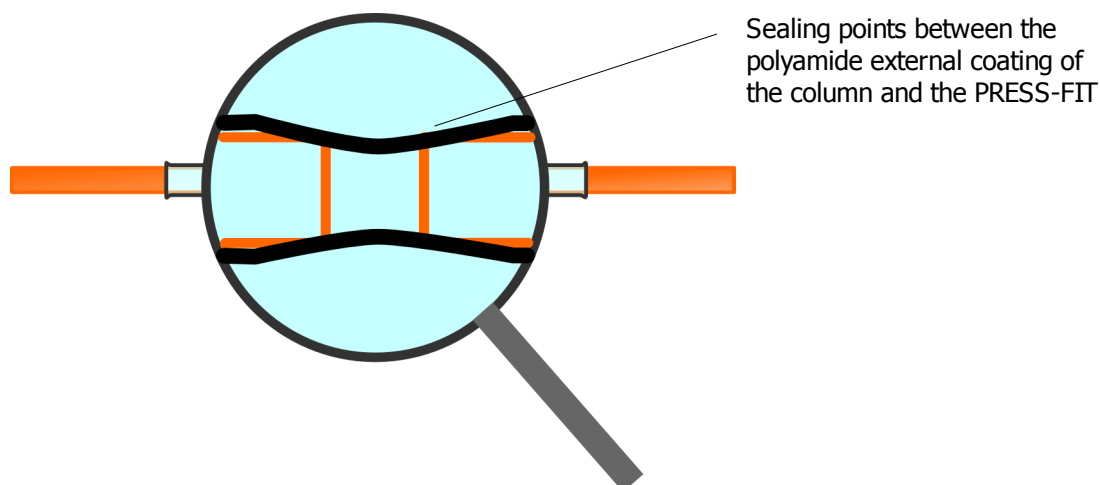
The PRESS-FITs are connection systems for fused silica capillary columns, made from small capillary glass tubing which have a conical cavity in which the external polymer coating of the column is fixed without using others adhesives or mechanical devices (see the figure 1). In this way it is possible to connect different capillary columns having also different internal diameters.

The PRESS-FIT connectors are the system that guarantee the lowest dead volume and the lowest thermal inertness, view their micro-size and the material (glass) with which they are made.



MEGA manufactures PRESS-FIT Connectors of different types:

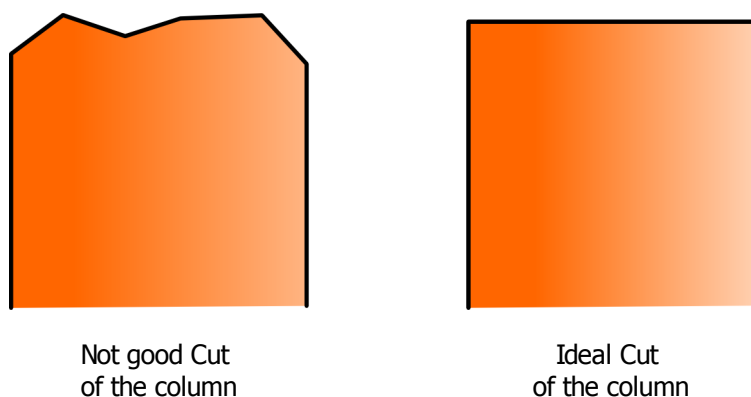
- **PRESS-FIT Union linear (2 ways):** they have two linear ways of connection. They are suitable for example for connecting a Retention Gap to a column with the same or with different diameters. They also may be employed for connecting in series two or more columns in a GCxGC system. It is possible to joint columns with internal diameter from 0.05mm to 0.53mm with any combination.
- **PRESS-FIT "Y" (3 ways):** they have three ways like an "Y". Those devices are made for systems that require for example two columns in parallel (a two detector, single injector system that mount two different polarity columns that work together in a single run). The "Y" connectors may be used also to make a split; we may be interested to split the carrier flow with the eluting component at the end of the column, in two different detectors (like a FID and a ECD or a FID and an olfactometric port).
- **PRESS-FIT Multiways (4 – 5 ways):** MEGA can produce Multiways connectors until five ports. Every way is completely customizable.



**Figure 1.** The Figure shows the sealing points that are created by crushing the roof of the external polyamide coating of the fused silica tubing on the inner walls of the conical part of the PRESS-FIT. This will ensure a great seal (**over 6 bar**) also for more connections in series.

### ***How to install the PRESS-FIT Connectors.***

The first step to connect a column to a branch of the Press-Fit is cut the ends of the column that you want to connect by making a cut as sharp and clean as possible, in order to have the maximum surface contact along the circumference of the column. Special cutters are in commerce to achieve ideal cutting. Anyway you can use standard ceramic cutter to get good cuts in a very simple way (it is always better to check the cut made with a magnifying glass when is possible).



Once you cut the column in the best way, is sufficient to push (no need to use excessive force that may break the pieces) the column inside the PRESS-FIT until the cone and press a little bit. It is possible also to dip the cut ends of the column in a solvent (methanol is good) before entering the column to the PRESS-FIT connectors, thus to create a film of liquid outside of the column that provide an immediate sealing. After then, you can simply run a blank cycle of the system (to clean all the GC system, columns etc.); with the temperature of the cycle, a real and definitive seal are achieved because the polyamide coating of the column acts like a glue and guarantee a perfect and durable seal.

### **How to place an order (or request a quote) for the PRESS-FIT Connectors.**

To place an order or request a quote, you can follow the instructions reported on the MEGA website ([www.mega.mi.it](http://www.mega.mi.it)) at the page "Help With Ordering". Briefly:

- It is always possible to request a quote for all the MEGA products directly on the website [www.mega.mi.it](http://www.mega.mi.it) where in the products section are listed all the parts with, for the PRESS-FIT connectors, all the possible combinations of dimensions.
- In case of e-mail ([info@mega.mi.it](mailto:info@mega.mi.it)) order (quote) or Fax (+39 0331.54.79.24) order (quote) please specify:
  - for the PRESS-FIT Union (2 ways), the internal diameters of the two columns to be connected.  
*Ex.: PRESS-FIT Union 0.53mm – 0.25mm.*
  - for the PRESS-FIT "Y" (3 ways) the internal diameters of the columns to be connected, specifying which is the single way of the "Y".  
*Ex.: PRESS-FIT Y 0.53mm single way – 0.25mm – 0-25mm.*
  - for the Multiways connector for special purpose, a form is available on the "Help With Ordering" page of the website; you can simply fill it and return to us by e-mail or by Fax.