

A

Adapter

A type of fitting which provides a method of joining two components of differing thread types or systems.

Analytical column

A long narrow tube packed or coated with one of many available chemically diverse compounds that can separate the components in a sample according to their boiling point, polarity, molecular size, or combination thereof. A column of some kind is used with most chromatographic techniques.

B

Biocompatibility

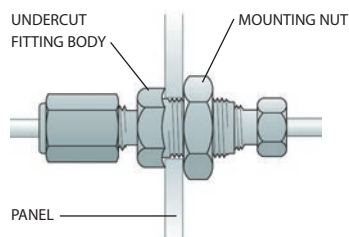
Defines the materials used in a system (i.e. fittings, tubing, and valves) that do not change the bioactivity of the biological substances that come into contact with the surface of these materials. Note that in chromatographic systems, the tubing and column contribute over 99% of the surface area and the valves and fittings are insignificant.

Bore

The diameter of the minimum orifice through the fitting. See capillary bore, through-type bore, and large bore.

Bulkhead fitting

A type of fitting in which the fitting body is inserted through an instrument panel or mounting bracket, to which it is affixed with a mounting nut. The Valco fitting body is uniquely undercut so that it "bites" into the panel when the mounting nut is tightened, eliminating the need for a lock washer.

**Butt connection**

A type of connection in which the two tube ends are directly and squarely in contact, usually effected with a through-type union. Typically used with fused silica connections, or small bore metal tubing.

C

Cap

A cap is used to dead-end a piece of tubing with a nut and ferrule attached.

Capillary bore

The smallest available standard orifice in a given fitting design (usually 0.25 mm). Typically denoted by suffix "C" in the product number.

Collapsible ferrule

A one-piece ferrule engineered to collapse as it is tightened. The collapse takes place in two very narrow areas, and results in a very effective seal with virtually no distortion of the tubing ID and no dead volume. Patent No. 6,575,501

Compression fitting

A style of fitting in which a threaded nut compresses a tapered ferrule onto tubing as the nut is tightened. Valco metal ferrules cut a ring into the tubing wall while polymer types rely on surface compression to form a seal.

Connecting volume

The volume between two or more connections. This may be cleanly swept, thus not contributing to peak distortion, or may be "dead volume" such as that found in fittings with larger bores than the connecting tubing.

Cross

A type of distribution fitting which connects four pieces of tubing, arranging them in the pattern of a cross.

D

Dead volume

Any volume which a component introduces to a system that is not cleanly swept and relies on diffusion to clear the space. See connecting volume.

