



Cheminert® Fittings and Accessories

Cheminert fittings are ideally suited for applications requiring an inert, biocompatible, metal-free flowpath. Wetted materials are PFA, FEP, CTFE, or PEEK, and uniform flow passages minimize mixing. All connections have zero dead volume.

MORE INFORMATION

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High Pressure Fittings

Cheminert high pressure fittings are rated at 5000 psi with fingertight nuts, well beyond the burst strength of most PEEK tubing. These fittings are machined from high quality inert polymers to the same exacting tolerances as our popular Valco zero dead volume fittings, and the taper angle and detail design conform to the industry standard established by the Valco line.

TECH TIP

For optimal zero dead volume connections, make sure your tubing meets the best industry standards. OD tolerance should be nominal dimension ± .002".

Fractional dimension	Nominal dimension
1/32"	.031
1/16"	.062
1/8"	.125
1/4"	.250
3/8"	.375
1/2"	.500

High Pressure Nanovolume® Fittings

Nanovolume generally refers to components with bore sizes of 100-150 µm (.004" - .006"). The minimal transfer volume contributed by nanovolume components makes them especially beneficial in applications with flow rates in the µl/min range, when the transfer volume can be critical.

10,000 psi = 689.5 bar
 20,000 psi = 1,378.9 bar

NEW 360 Micron Nanovolume Fittings

Our newest high pressure fittings permit direct connection of 360 micron OD fused silica, PEEK, stainless, or electroformed nickel tubing without the use of liners. The ferrule snaps into the nut so that the fitting is "one-piece", but the ferrule remains free to rotate as the nut is tightened so that the tube doesn't twist. Because of the compact size and fine 2-56 threads, a leak-free connection that seals at pressures in excess of 20,000 psi can be easily formed with the available manual tool.

1/32" Nanovolume Fittings

1/32" Cheminert nanovolume fittings, with 100 µm or 150 µm bore, are ideal for high resolution capillary chromatography. Rated at 5,000 psi with fingertight nuts, they will remain leak-tight well beyond the burst strength of most PEEK tubing. These fittings are machined from high quality inert polymers to the same exacting tolerances as our popular Valco zero dead volume fittings, and the taper angle and detail design conform to the industry standard established by the Valco line.

50 µm	= .002"
100 µm	= .004"
150 µm	= .006"
0.25 mm	= .010"
0.50 mm	= .020"
0.75 mm	= .030"
1.0 mm	= .040"
1.5 mm	= .060"
2.0 mm	= .080"
4.6 mm	= .180"
6.0 mm	= .236"
6.4 mm	= .253"
7.0 mm	= .275"
10.0 mm	= .400"
27.0 mm	= 1.08"
1/32"	= 0.8 mm
1/16"	= 1.6 mm
1/8"	= 3.2 mm
1/4"	= 6.4 mm
3/8"	= 9.5 mm
1/2"	= 12.7 mm

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- For direct connection of 360 µm tubing
- Work with metal, fused silica, or PEEK
- Up to 20,000 psi with metal tubing
- Snap-in rotating ferrule for "one-piece" fitting with no tubing twist
- Eliminate use of troublesome liners

Our new high pressure fittings permit direct connection of 360 micron OD fused silica, PEEK, stainless, or electroformed nickel tubing without the use of liners. The ferrule snaps into the nut so that the fitting is "one-piece", but the ferrule remains free to rotate as the nut is tightened so that the tube doesn't twist. Because of the compact size and fine 2-56 threads, a leak-free connection that seals at pressures in excess of 20,000 psi can be easily formed with the available manual tool.

360 µm fittings are dedicated for use with either fused silica, metal, or PEEK tubing; components cannot be mixed or used with a different tubing material.

Tees and crosses offer a choice of three bore sizes, and feature a "quick-mount" base with adhesive backing to make sure that the fitting is stable and fragile tubing doesn't get broken. There is also a quick-mount PEEK union.

MORE INFORMATION





Nanovolume fittings
 For fused silica tubing,
 10,000+ psi pg 58
 For metal tubing,
 up to 20,000 psi 58

1/32" Nanovolume
 fittings59-60
 Injectors with
 360 micron fittings. .152




For PEEK or fused silica tubing — up to 10,000 psi

These fittings are constructed from premium grade natural PEEK material. They are intended for use with PEEK or fused silica tubing at pressures up to 10,000 psi, or the maximum pressure for which the tubing is rated, whichever is lower. Quick-mount versions have integral base with double stick tape to secure fittings to a surface.



Nut/ferrules, caps, plugs, tightening tool for 360 µm tubing

	Prod No	Price
 Nut/ferrule	C360NFKG	
 Cap	C360CPKG	
 Plug	C360PPK	
 Tightening tool	C360ET	

Unions and reducing unions for 360 µm tubing

	Bore size:	50 micron		100 micron		150 micron	
		Prod No	Price	Prod No	Price	Prod No	Price
 Union, quick mount		C360QUPKG2		C360QUPKG4	\$65	C360QUPKG6	
 Union		C360UPKG2		C360UPKG4	48	C360UPKG6	
 Reducing union, 1/16" to 360 µm		—		—		C360RU1PK6	

Tees and crosses for 360 µm tubing

	Bore size:	50 micron		100 micron		150 micron	
		Prod No	Price	Prod No	Price	Prod No	Price
 Tee, quick mount		C360QTPKG2		C360QTPKG4	\$82	C360QTPKG6	
 Cross, quick mount		C360QXPKG2		C360QXPKG4	100	C360QXPKG6	

NEW 360 µm Nanovolume Fittings





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For fused silica tubing — 10,000 psi and above

These fittings are constructed from HPLC grade stainless steel, with stainless steel nut and a special ferrule which is precision machined from electroformed nickel. For optimal sealing characteristics, the ferrule is gold plated.

Nut/ferrules and caps for 360 µm FS tubing

	Prod No	Price
 Nut/ferrule	C360NFFS	
 Cap	C360CFS	



Unions and reducing unions for 360 µm FS tubing

	50 micron		100 micron		150 micron	
	Prod No	Price	Prod No	Price	Prod No	Price
 Union	C360UFS2		C360UFS4		C360UFS6	
 Reducing unions, 1/32" to 360 µm	C360RU.5FS2		C360RU.5FS4		C360RU.5FS6	
 Reducing unions, 1/16" to 360 µm	—		—		C360RU1FS6	




For metal tubing — up to 20,000 psi

Our highest pressure Nanovolume fittings are constructed of HPLC grade stainless steel, including stainless steel nut and ferrule. These fittings are optimized for use with stainless or electroformed nickel tubing.

Nut/ferrules and caps for 360 µm tubing

	Prod No	Price
 Nut/ferrule	C360NFS6	
 Cap	C360C	

Unions and reducing unions for 360 µm tubing

	50 micron		100 micron		150 micron	
	Prod No	Price	Prod No	Price	Prod No	Price
 Union	C360US62		C360US64		C360US66	
 Reducing unions, 1/32" to 360 µm	C360RU.5S62		C360RU.5S64		C360RU.5S66	
 Reducing unions, 1/16" to 360 µm	—		—		C360RU1S66	

MORE INFORMATION

360 µm fittings for use below 10,000 psi..... 57
 360 µm tubing
 Electroformed nickel. 87
 PEEK 88
 1/32" Nanovolume fittings 59-60

TECH TIP

Use these **metal 360 micron nuts** with nano injectors:
 C72MU p 152
 C72MX 152

50 µm	=	.002"
100 µm	=	.004"
150 µm	=	.006"
0.25 mm	=	.010"
0.50 mm	=	.020"
0.75 mm	=	.030"
1.0 mm	=	.040"
1.5 mm	=	.060"
2.0 mm	=	.080"
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10.0 mm	=	.400"
27.0 mm	=	1.08"
1/32"	=	0.8 mm
1/16"	=	1.6 mm
1/8"	=	3.2 mm
1/4"	=	6.4 mm
3/8"	=	9.5 mm
1/2"	=	12.7 mm

NEW INTERNAL REDUCERS FOR 360 µm TUBING

Directly connect 360 µm tubing into a 1/32" Valco valve or fitting detail, providing a positive leak-free seal with zero dead volume. The same patented design as our larger internal reducers (page 34). Both versions have a stainless steel body.

Tubing OD	Nut/ferrule material	Prod No	Price
1/32" to 360 µm	Stainless	C360IZR.5S6	\$34
	PEEK	C360IZR.5S6PK	34

Nanovolume Fittings for 1/32" Tubing



Designed for high resolution capillary HPLC, Cheminert nanovolume connectors include our one-piece 1/32" fingertight fittings, with a patented collapsible ferrule that makes fingertight nanovolume connections a snap. These fittings

work with a variety of tubing, including PEEK, fused silica, and 1/32" electroformed nickel. Liners adapt the fittings for use with fused silica.





To avoid potential confusion, all fittings utilizing the Cheminert collapsible ferrule are made of black PEEK; fittings with a standard Valco ZDV fitting detail are natural PEEK.



Nuts and ferrules

for 1/32" tubing

Valves and fittings are supplied with the appropriate quantity of nuts and ferrules. However, if additional fittings are required, they may be ordered separately. The two internal nuts include collapsible ferrules as an integral part of the fitting; the external nut must be used with the separate ferrule listed below.

		Prod No	Price each:
	Internal nut with collapsible ferrule <i>For use with:</i> Fittings on pages 60-62 6 port valve CN2-4346, page 154 4 port internal sampling injector CN4-4344, page 155	C-NNFFPK	
	Internal nut with collapsible ferrule <i>For use with:</i> 10 port nanovolume valve CN2-4340, page 154	C-NNFLPK	
	External nut <i>For use with:</i> Unions on page 61 Column end fittings on page 62 Note: Requires collapsible PEEK ferrule, below	C-EN.5FPKB	
	Collapsible PEEK ferrule <i>For use with:</i> External nut, above	ZGF.5PK	

MORE INFORMATION


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Tubing
PEEK 88-89
Electroformed nickel 87

TECH TIP

Use these **collapsible ferrule-nuts** with:
1/32" Nanovolume fittings pp 60-62
and with injectors:
CN2 154
CN4 155

Plugs

for 1/32" tubing

		Prod No	Price each:
	Internal plug <i>For use with:</i> Fittings on page 60 Nanovolume valves on pages 154-155	C-NPFPK	