

The ZirChrom® guard column system is composed of a guard column holder and a guard column insert.

WARNING: DO NOT USE THE GUARD COLUMN SYSTEM AT TEMPERATURES OVER 70 DEGREES CELSIUS.

The guard column system includes the following components:

- 1) one guard column holder (includes one guard assembly, one tubing segment, two 1/16" nuts and two ferrules) (ZirChrom part # 852-00 or 850-00)
- 2) one guard column insert (sold in packs of three) (ZirChrom part # G20 or G40)

See reverse side for patent information, or to order additional guard column holders, inserts or replacement parts.

Guard insert installation instructions:

- 1) Unscrew portion A of the guard assembly from portion B (see **Figure 2**). 2) Seat the guard insert into portion B of the guard assembly. 3) Replace portion A of the guard assembly and turn clockwise until finger-tight. 4) Using two wrenches, tighten guard assembly until leak-tight (approximately 30 degrees).

Connecting guard assembly to column:

- 1) Assemble the tubing connector by placing one 1/16" nut and one ferrule on each end of the tubing segment (see **Figure 2**). 2) Insert one end of the assembled tubing connector into the inlet of your analytical column (see **Figure 3**). 3) Screw the male-end fitting, until finger-tight, into the inlet of your column while applying slight pressure to correctly seat the ferrule. 4) Further tighten the male end fitting with a wrench until it is leak-tight. 5) Insert the other end of the assembled tubing connector into the outlet of your guard assembly (see **Figure 3**). 6) Screw the male-end fitting, until finger-tight, into the outlet of your guard assembly while applying slight pressure to correctly seat the ferrule. 7) Further tighten the male end fitting with a wrench until it is leak-tight. 8) Place the inlet fitting from your HPLC injector into the inlet of the guard assembly and rotate until finger-tight. 9) Place the outlet fitting to your analytical column and rotate until finger-tight. Your final assembly is now complete (see **Figure 3**).

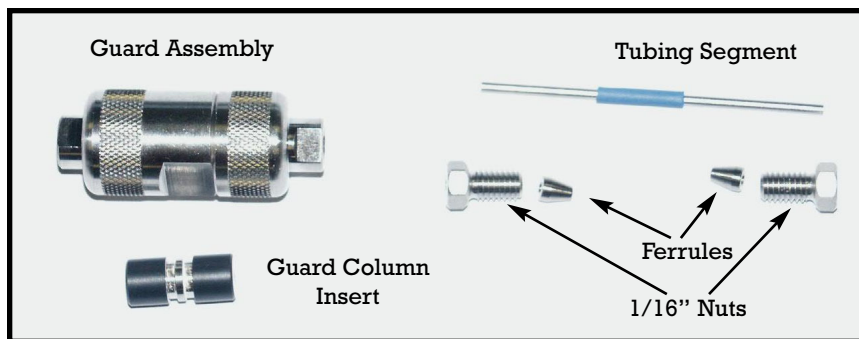


Figure 1: Description of Parts

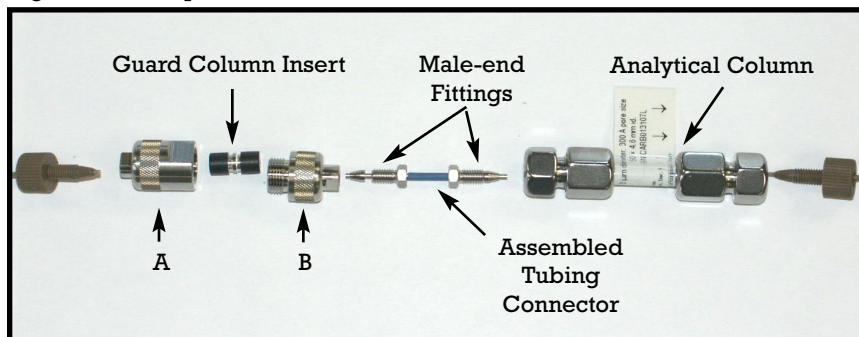


Figure 2: Expanded Layout

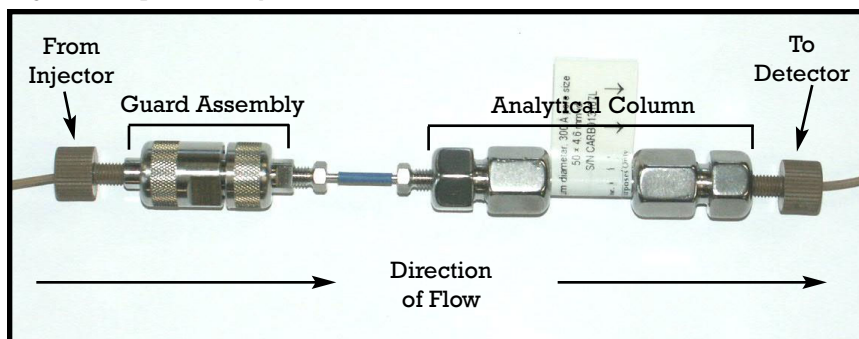


Figure 3: Final Assembly

This product and/or its method of use is covered by one or more of the following patent(s): **US Patent No. 5,015,373, 5,108,597, 5,141,634, 5,205,929, 5,254,262, Re: 34,910, 5,271,833, 5,346,619, 5,540,834, 6,846,410, 8,137,548** and foreign equivalents. Additional patents are pending in the United States.

TO ORDER ADDITIONAL INSERTS, HOLDERS, OR REPLACEMENT PARTS:

Call 1-866-STABLE-1, or visit www.zirchrom.com

PHASE NUMBER	PHASE NAME	MODE OF USE
DB01	DiamondBond-C18	Reversed-Phase
EZ01	ZirChrom-EZ	Reversed-Phase
MS01	ZirChrom-MS	Reversed-Phase
TI01	Sachtopore-RP	Reversed-Phase
TI02	Sachtopore-NP	Normal Phase
ZR01	ZirChrom-CARB	Reversed-Phase
ZR02	ZirChrom-PHASE	Normal Phase
ZR03	ZirChrom-PBD	Reversed-Phase
ZR04	ZirChrom-WCX	Weak Cation-Exchange
ZR05	ZirChrom-WAX	Weak Anion-Exchange
ZR06	ZirChrom-SAX	Strong Anion-Exchange
ZR07	ZirChrom-SHAX	Strong Anion-Exchange
ZR08	ZirChrom-PEZ	Cation-Exchanger for Proteins
ZR09	ZirChrom-PS	Reversed-Phase
PT01	ProTain	In-Line Protein removal system

A ZirChrom guard column insert part number is constructed as follows: PPPP-XYX. For example, ZR03-G40 specifies a 4.6mm guard insert containing ZirChrom-PBD. Part numbers for guard column holders and replacement parts are numeric and as shown below.

	Carbon Reversed Phases DB01 ZR01	Normal/Reversed Phases EZ01 MS01 TI01 TI02 ZR02 ZR03 ZR09	Zirconia Ion Exchangers ZR04 ZR05 ZR06 ZR07 ZR08
Guard Column Inserts G20 - Use with 2.1mm G40 -Use with 4.6mm	<i>Set of 3 inserts</i> \$240	<i>Set of 3 inserts</i> \$218	<i>Set of 3 inserts</i> \$218
Guard Column Holders 852-00 - Use with 2.1mm 850-00 - Use with 4.6mm	\$82	\$82	\$82

ProTain	
852-00-2 - Use with 2.1mm	\$82
850-00-2 - Use with 4.6mm	\$82
PT01-0221 – <i>set of 3 inserts</i>	\$329
PT01-0246 – <i>set of 3 inserts</i>	\$329

