

Converting Packed Inlets to Capillary Column Use

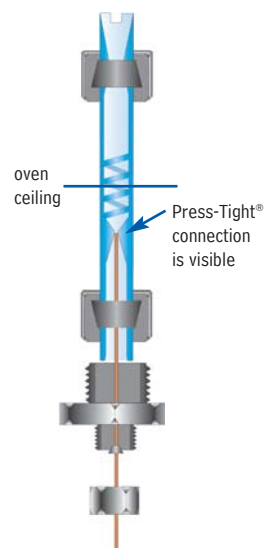
Two types of inlet conversion kits are available for a 1/4-inch packed column injection port to fit either 0.32 or 0.53mm ID capillary columns: the Vu-Tight liner and the Uniliner® liner with adaptor (next page). The Vu-Tight liner fits directly into the 1/4-inch injection port and allows visual confirmation of the connection between the column and the liner. The Uniliner® liner and adaptor work together to allow either direct or on-column injection when using 0.53mm ID columns. Both systems incorporate a Press-Tight® connection between the liner and column inlet, minimize dead volume, and reduce solvent peak tailing.

Features of Both Conversion Kits:

- Fit Agilent, Varian, and other common GCs with 1/4-inch packed column injection ports (with maximum insertion depth of 4 inches).
- Install easily within fifteen minutes.
- Accommodate either 0.32 or 0.53mm ID fused silica columns (tubing OD ≥ 0.5mm).
- Liners are deactivated and extremely inert.
- Liners designed to accept dirty samples are available for either system.
- Press-Tight® connections between the liner and column inlet minimize dead volume, reduce solvent peak tailing, and sharpen early-eluting components.

Vu-Tight Inlet Liners for 1/4-Inch Packed Injection Port Conversion

- Visually observe the Press-Tight® connection between the column end and liner.
- Fit 0.32 and 0.53mm ID capillary columns (column ODs from 0.5mm to 0.8mm).
- Slotted top prevents obstruction of carrier gas flow.
- Two designs available.
- Operate in the direct injection mode.



Vu-Tight Inlet Liners for 1/4-Inch Packed Injection Port Conversion

Can easily be packed with wool for dirty samples.

Description	qty.	cat.#
Vu-Tight DI Liner	ea.	20342
Vu-Tight DI Liner	5-pk.	20343
Vu-Tight DI Liner	25-pk.	20344

Cyclo Vu-Tight DI Liner (1/4-inch OD)

Ideal for dirty samples. Spiral bore prevents nonvolatile residue from contaminating the column.

Description	qty.	cat.#
Cyclo Vu-Tight DI Liner	ea.	20787
Cyclo Vu-Tight DI Liner	5-pk.	20788

Vu-Tight Installation Fittings Kit

Includes a 1/4-inch stainless steel nut and graphite ferrule for attaching the liner to the GC inlet and a 1/4 to 1/16-inch stainless steel reducer, plus a 1/4-inch and 0.5mm ID graphite ferrule for attaching the column to the liner.

Description	qty.	cat.#
Vu-Tight Installation Fittings Kit	kit	20504

it's a fact

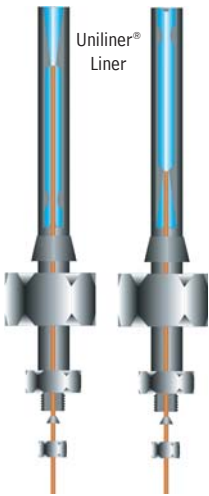






Vu-Tight Inlet Liners

The 1/4-inch Vu-Tight liner fits directly into a 1/4-inch injection port. The connection between the liner and the column is in the GC oven, allowing visual confirmation of the seal. Problems, such as a crushed column end in the Press-Tight® taper, can be detected easily, making proper installation worry-free. The Cyclo Vu-Tight liner prevents non-volatile residue from contaminating the column.

it's a **fact****Uniliner® Liner for 1/4-Inch Packed Injection Port Conversion**

- Reduces solvent tailing.
- Versatile—0.53mm ID version can be used in the direct (DI) or on-column (OC) injection mode.
- Incorporates a gentle taper that seals the column and reduces dead volume in direct injection mode.
- Available in various designs.

On-column injections can be performed only with 0.53mm ID columns because 26-gauge needles do not fit into the bore of 0.32mm ID columns, or into the Uniliner® liner taper.

Description	Column ID Injection Mode*	ea. cat.#	5-pk. cat.#
 Uniliner® Liner (small buffer volume chamber 60mm long, for injections ≤2µL) 	0.53mm ID DI or OC	20902	20903
Uniliner® Liner (large buffer volume chamber 85mm long, for injections ≤4µL) 	0.32 & 0.53mm DI only	20308	20309
	0.53mm DI or OC	20301	20305
Cyclo-Uniliner® Liner (for active, dirty samples) 	0.32 & 0.53mm DI only	20319	20320
Open-Top Uniliner® Liner (packed with wool) 	0.32 & 0.53mm DI only	20315	20316
Low Volume/Purge & Trap Uniliner® Liner (1mm ID x 5mm OD: use in 1/4" injection ports to troubleshoot purge & trap units) 	0.32 & 0.53mm DI only	20307	20314
Uniliner® Liner Adaptor (required for installing Uniliner® liners in 1/4" injection ports) 	Includes 1/4-inch nut & graphite ferrule, 1/16-inch nut, and 0.8mm ID graphite ferrule.		
		Stainless Steel	Siltek® Treated
	For injection ports <8cm	20310	22282
	For injection ports 8-15cm	20311	
	For Shimadzu	20312	
Ferrules for Uniliner® Liner Adaptor		cat.# 20234 (5-pk.)	

*DI = direct injection, OC = on-column injection

Note: a Uniliner® liner must be used with a Uniliner® Liner Adaptor (cat.# 20310 or 20311) for 1/4-inch injection ports. Remember to include a liner adaptor when ordering a Uniliner® liner, unless you are purchasing replacement Uniliner® liners.

tech tip**Minimizing Backflash**

Backflash occurs when the volume of the sample vapor exceeds the buffer volume of the injection liner. This phenomenon causes poor reproducibility, tailing analyte peaks, a broad solvent peak, ghost peaks, and nonlinear responses. You can minimize backflash by using a solvent that has a low expansion volume, injecting less sample, installing an injector liner with a larger volume, or reducing the injector temperature.

Injection Port Conversion Chart

Instrument	Uniliner® Liner Set-Up		Vu-Tight Fitting		
	Uniliner® Liner: cat.# 20301, 20305, 20308, 20309, 20315, 20316, 20319, 20320, 20902, & 20903	Liner Adaptor: cat.# 20310	Liner Adaptor Fitting*: cat.# 20312	Vu-Tight Fitting Kit: cat.# 20504 Liner: cat.# 20342, 20343, 20344, 20787, & 20788	Vu-Tight Fitting Kit: cat.# 20504
Agilent GCs (1/4-inch injection ports) Models: 5700, 5710, 5711, 5712, 5830, 5840, 5880, 5890, 6850, 6890	✓	✓		✓	✓
Varian GCs (1/4-inch injection ports) Models: 1200, 1400, 2100, 2400, 3300-3700, 4400, 4600, 6000	✓	✓		✓	✓
Tracor GCs (1/4-inch injection ports) Models: 540, 550, 560, 565, 570	✓	✓		✓	✓
Packard Becker GCs (1/4-inch injection ports) Models: 427, 428, 429, 430, 433, 436, 437, 438	✓	✓		✓	✓
Gow-Mac GCs (1/4-inch injection ports) Models: 69-750, 69-550	✓	✓		✓	✓
HNU GCs (1/4-inch injection ports) Models: 301, 401, 421	✓	✓		✓	✓
Shimadzu Packed Column GCs (5mm injection ports)** Models: GC-4, GC-6 thru 9, GC-14, GC-15, GC-16, GC-17, Mini, 2010	✓		✓		
PerkinElmer GCs (1/4-inch injection ports) Models: Sigma, 1B-4B, 300, 2001, 2100	✓	✓		✓	✓
PerkinElmer Auto SYSTM*	✓				

*Does not require Uniliner® liner adaptor.

**See page 183 for 5mm Stainless Steel Uniliner® Liner Adaptor Fitting.

Micropacked Inlet Conversion Kits

Convert a capillary GC split/splitless inlet for use with 1/16" OD micropacked columns.

- For use with Agilent 5890 and 6890 GCs.
- Sample pathways deactivated for ultimate inertness.



Description	qty.	cat.#
Micropacked Column Adaptor Kit for Split/Splitless Injection*** <i>Complete kit with FID and injection port adaptors</i> Kit includes: Dual Vespel® Ring Inlet Seal, large bore; reducing nut, large bore; FID adaptor, large bore; 1/4" ferrule, Vespel®/graphite; 1/4" nut, stainless steel; 1/16" ferrules, Vespel®/graphite (2); 4mm splitless liner, intermediate polarity deactivated; 1/16" nuts, stainless steel (2)	kit	22424
Micropacked Column Adaptor Kit for On-Column Injection*** <i>Complete kit with FID and injection port adaptors</i> Kit includes: Dual Vespel® Ring Inlet Seal, large bore; reducing nut, large bore; FID adaptor, large bore; 1/4" ferrule, Vespel®/graphite; 1/4" nut, stainless steel; 1/16" ferrules, Vespel®/graphite (2); Siltek® treated metal liner installation guide; 1/16" nuts, stainless steel (2)	kit	22425
Micropacked Column Adaptor Kit for Split/Splitless Injection <i>Injection Port Adaptor Kit</i> Kit includes: Dual Vespel® Ring Inlet Seal, large bore; reducing nut, large bore; 1/16" ferrule, Vespel®/graphite; 1/16" nut, stainless steel; 4mm splitless liner, intermediate polarity deactivated	kit	22426
Micropacked Column Adaptor Kit for On-Column Injection <i>Injection Port Adaptor Kit</i> Kit includes: Dual Vespel® Ring Inlet Seal, large bore; reducing nut, large bore; 1/16" ferrule, Vespel®/graphite; Siltek® treated metal liner installation guide; 1/16" nut, stainless steel	kit	22427
Micropacked Column Adaptor Kit for FID*** <i>FID Adaptor Kit</i> Kit includes: FID adaptor, large bore; 1/4" ferrule, Vespel®/graphite; 1/4" nut, stainless steel; 1/16" nut, stainless steel; 1/16" ferrule, Vespel®/graphite	kit	22428
Replacement Inlet Seals for Micropacked Column Adaptor Dual Vespel® Ring Inlet Seals, large bore (2)	2-pk.	22429
Replacement Metal Liner Installation Guide for On-Column Injection Siltek® treated metal liner installation guide	ea.	22430
Replacement 4mm Splitless Liner	ea.	20772



***For use with packed column FIDs only.