

SIELC Technologies, Inc
Wheeling, IL 60090 USA
P: 847-229-2629 F: 847-655-6079
mail@sielc.com www.sielc.com



A NEW COLUMN FORMAT FOR MODERN HPLC



FUTURE OF LIQUID CHROMATOGRAPHY

HPLC COLUMN OF THE FUTURE

For as long as people have performed HPLC, they have used the same column format, the same method of connecting the column to the system, and they have encountered the same problems:

 Clogging at the tube-column junction



Installation problems with tubing to achieve minimum dead volume

 Leakage around the high pressure solvent connections



Selecting the proper tube length and ID

 Sorting through many available high pressure fittings



There is not enough space on a short column to place a full-size label

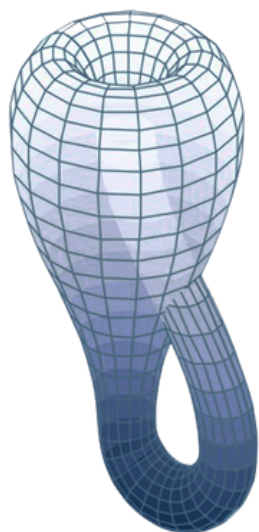
SIELC INTRODUCES A NEW SINGLE ENDED COLUMN DESIGN

To address these issues, a new column design was developed. This column, along with its corresponding adapter, completely eliminates the need for any high-pressure fittings or tubing, while also minimizing all possible dead volumes. Furthermore, if a leak ever occurs at the high-pressure column inlet, the mobile phase is contained within the column adapter—preventing any external leakage.

All SIELC and traditional columns available in a new format, including C18, HILIC, ion exchange, mixed-mode, ion exclusion, size exclusion, protein, BIST, and normal phase.



HPLC COLUMN OF THE FUTURE



The Single-Ended HPLC Column by SIELC is based on a proprietary patented hardware design.

Instead of two separate fittings, the column and adapter form one seamless, coaxial connection with near-zero dead volume and perfect flow alignment.

This design ensures a contained and stable movement of the mobile phase at all flow rates and pressures.

The single-ended system simplifies column installation and guarantees consistent, reproducible chromatographic performance.

Install the adapter once with ultra-high-pressure fittings — and never use fittings again.

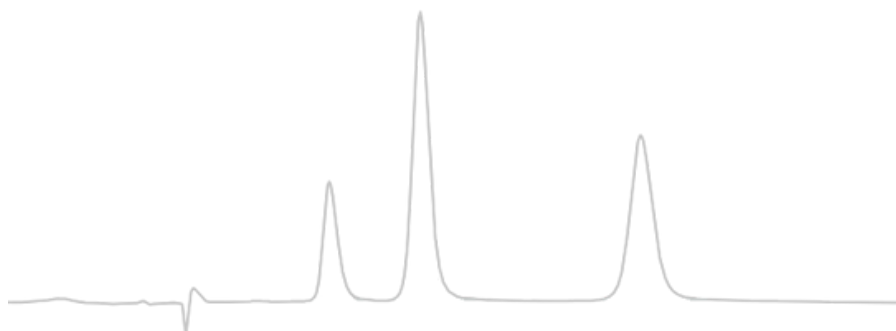
HOW IT WORKS?



As the mobile phase enters through the **MP Inlet**, it flows into the adapter's internal capillary aligned with the column axis. When the Mobile Phase passes through the column packing bed it goes in the bypass

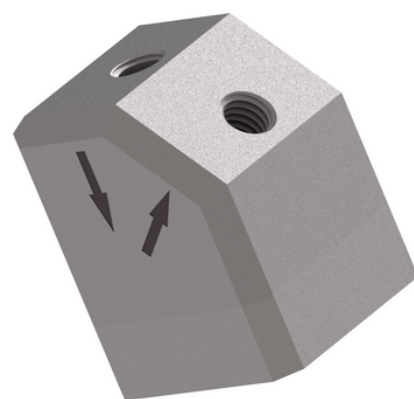
channel connected with **MP Outlet**.

This design eliminates dead volume, prevents mobile-phase leakage, and provides a simple way to remove and replace the column when needed.



HPLC COLUMN ADAPTER

The SIELC adapter is a key component of the new single-ended column system, designed to eliminate leaks, dead volume, and connection complexity in HPLC setups. This adapter is an engineering solution that ensures perfect sealing, precise flow alignment, and reliable performance under high pressure — all without traditional fittings, ferrules, or tools.



Dimensions: 21 × 21 × 26 mm (0.83 × 0.83 × 1.02 in)

Special offer: First-time buyers receive a Free Single-Column Adapter with their purchase. Experience the new connection standard — no fittings, no leaks, no extra cost

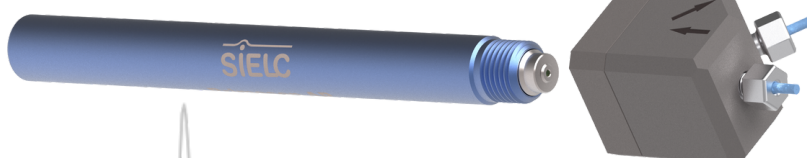
KEY FEATURES

✓ Near-zero dead volume column connection. No fittings need to be disconnected to replace the column.

✓ Stainless-steel adapter for high-pressure applications. The small size of the adapter allows it to be installed in a column heater or cooler.

✓ Smooth, protrusion-free body allows full-size labeling even on the shortest column.

✓ Aluminum outer column body ensures even and efficient heat transfer.



ADAPTER FOR GUARD COLUMN

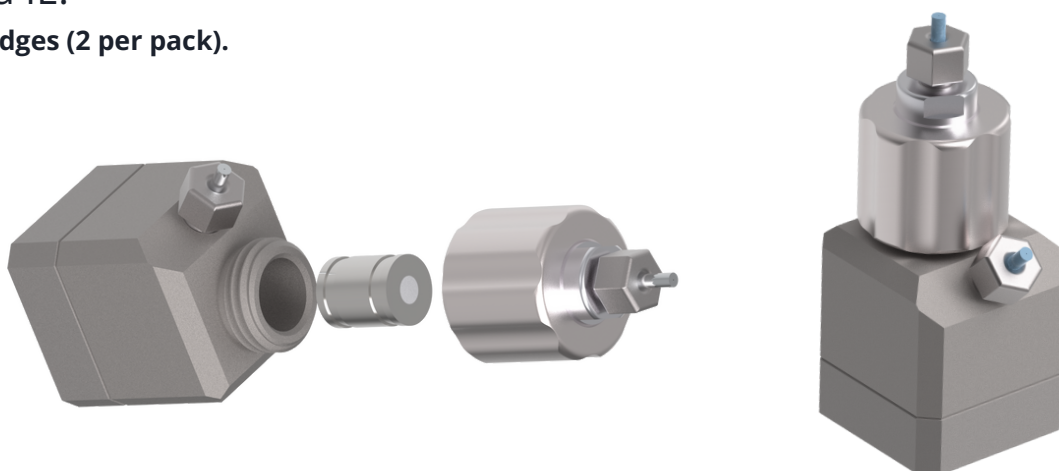


If your workflow requires a guard column or a filter to be installed inline with the main column, then a specialized adapter with a guard option should be used.

The SIELC HPLC Single-Column Guard protects the analytical column by capturing particulates and strongly retained contaminants before they reach the stationary phase. Its unique direct-insert design provides a zero-dead-volume connection and allows quick, tool-free replacement of a used guard with a new one.

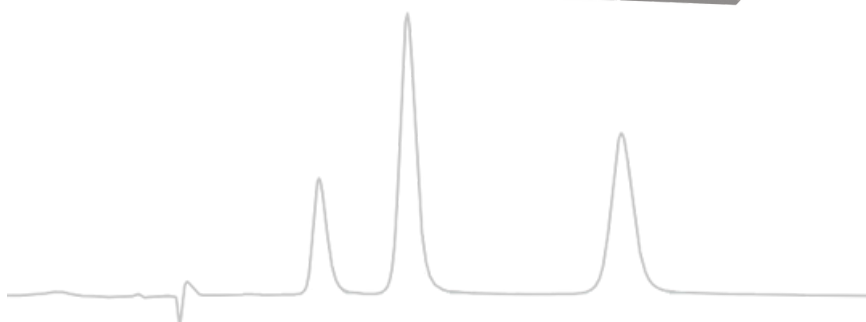
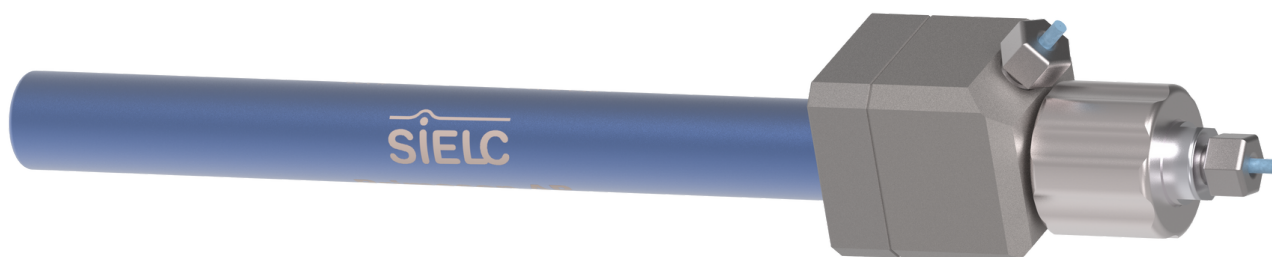
Guards are available for all SIELC stationary phase types — Primesep™, Newcrom™, Chromni™, PEI™, BIST™, and for generic phases such as C18, HILIC and IE.

Guard Cartridges (2 per pack).



Dimensions: 21 × 21 × 42 mm (0.83 × 0.83 × 1.65 in)

Manufactured and quality-tested in the USA, SIELC HPLC Single Column Guards extend the lifetime of analytical columns, maintain low peak dispersion, high reproducibility, and reduce overall operating costs.



CONTACT US



For Product Information

Email: sales@sielc.com



For Accounts Payable

Email: finance@sielc.com



For Method Development

Email: research@sielc.com

We offer free HPLC method development tailored to your specific compounds, ensuring optimized separations with reliable, reproducible results. Free custom solutions—designed for seamless analytical performance.

Call: 847 229-2629

Fax: 847 655-6079

SIELC Technologies,

804 Seton Ct.

Wheeling, IL USA 60090



Please do not hesitate to give us a call at +1 (847) 229-2629 or send us an email at **mail@sielc.com** if you have any questions at all.



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031 336 90 00 • www.scantecnordic.se

