

## Thread Specifications of PEEK HPLC Column Hardware - Tech Information

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### Thread Specifications for ARE Brand PEEK HPLC Column Hardware

The ARE-Applied Research Brand™ PEEK HPLC column hardware is designed with standardized thread formats to ensure compatibility across a broad range of fittings, end plugs, and tubing systems used in HPLC.

Understanding these thread specifications is essential for ensuring proper sealing, preventing leaks, and maintaining chromatographic performance.

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#### 1. Outlet / External End-Fitting Thread (Universal Across All IDs)

All PEEK end fittings in the ARE brand hardware use the same 10-32 UNF female threading on the outside of the end fitting.

This universal 10-32 interface is used for:

- Connecting end plugs
- Connecting 1/16" OD HPLC capillary tubing
- Accepting standard HPLC ferrules that match a 10-32 receiving port

Because this thread format does not change with column ID, users can rely on consistent compatibility across the entire PEEK hardware line.

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#### 2. Column Tube-to-End-Fitting Thread (Varies by Column ID)

The internal connection—where the PEEK column tube threads into the end fittings—changes based on the internal diameter (ID) of the column. These threads are larger than the outlet thread and provide the structural strength necessary to withstand packing and operating pressures.

Thread sizes by internal diameter (ID):

Column ID	Column Tube-to-End-Fitting Thread	Notes
2 mm ID	1/4-28	Common threading for small-ID polymer columns; supports typical analytical pressures.

<b>4.6 mm ID</b>	<b>1/2-20</b>	Larger diameter for structural stability under higher flow and packing loads.
<b>7.5 mm ID</b>	<b>5/8-18</b>	Robust threading for wider-bore columns, especially important during packing.

These thread formats ensure that each column diameter has proper mechanical strength, sealing integrity, and resistance to torque during assembly and disassembly.

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### **Choosing the Correct Hardware and Accessories**

Because the outlet thread is always 10-32 while the tube-to-fitting thread varies, users should ensure:

- End fittings match the correct ID-dependent thread size
- Compatible frits and sealing rings are used for each diameter
- Packing hardware (adapters, reservoirs, etc.) corresponds to the specific thread standard of the column body

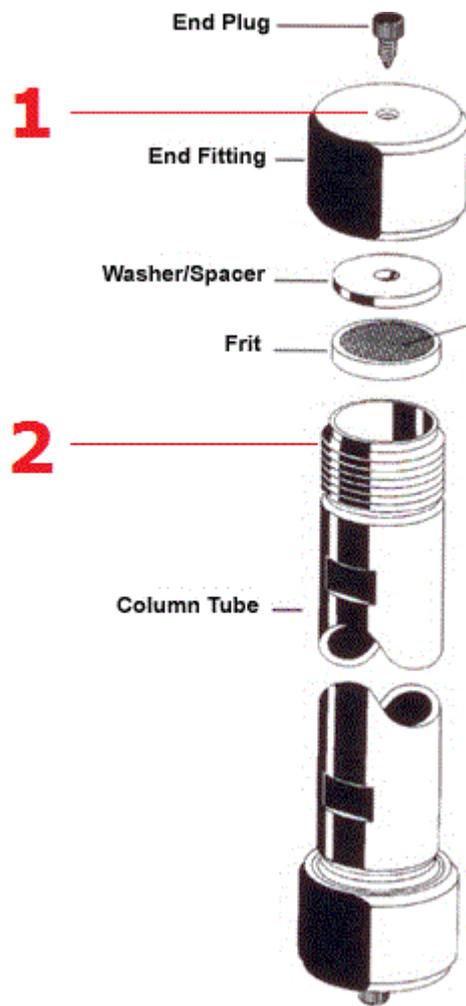
Ordering listings for matching PEEK hardware, end fittings, and frits can be found under: PEEK Hardware Ordering Information [PEEK Hardware Ordering Information](#)

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### **Practical Notes for Users**

- Always avoid cross-threading; PEEK threads can be damaged if misaligned.
- Tighten by hand before applying torque to avoid stripping polymer threads.
- Verify that stainless-steel fittings are not overtightened into PEEK components.
- Ensure all ferrules and tubing used are rated for 10-32 receiving ports.

Proper threading alignment and component matching help maintain leak-free performance and protect both the column and the instrument.



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