

Maximum Pressure Range for Cogent Guard Columns - Tech Information

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Overview

This article provides guidance on the maximum pressure limits for Cogent Guard Columns and the appropriate coupling hardware for various system pressures. Since guard columns must match the performance parameters of the analytical columns they protect, understanding these limits helps ensure reliable operation, extended column lifespan, and proper system configuration.

Recommendations for both standard 4 μm phases and high-pressure Cogent 2.0™ phases are included, along with notes on when PEEK couplers are suitable and when UHPLC-rated metal couplers should be used.

Maximum Pressure Ratings

Standard 4 μm Cogent Guard Columns

- Stable up to a maximum of 6000 psi.
- Recommended operational pressure: ≤ 4500 psi for optimal longevity.

Cogent 2.0™ Guard Columns

- Designed for higher-pressure applications.
- Recommended operational limit: ≤ 9000 psi.

These pressure limits follow the same specifications as their corresponding analytical columns, ensuring matched performance and predictable chromatographic behavior.

Coupler Recommendations

Use of PEEK Couplers

- PEEK couplers are suitable for typical HPLC operating pressures.
- They provide chemical resistance and ease of handling.

When to Avoid PEEK

- UHPLC pressures can exceed PEEK's mechanical limits.
- For UHPLC systems, use stainless steel or other high-pressure-rated metal couplers.



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