

## Maximum Pressure Cogent HPLC Columns Can Tolerate - Tech Information

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### What Is the Maximum Pressure Cogent HPLC Columns Can Tolerate?

Selecting appropriate operating pressure protects your column, your instrument, and your data quality. Here's what you need to know for Cogent™ columns in routine lab use:

- 4–5 µm Cogent Columns
  - Rated up to: 6,000 psi max.
  - Recommended during runs: ≤4,500 psi (most instrument makers advise against sustained operation near the mechanical limit).
- 2.0™ (2.2 µm) Cogent Phases
  - Routine use ceiling: ~9,000 psi (do not exceed in day-to-day operation).

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### Why These Limits Matter

Running at or near the mechanical maximum increases risk of hardware stress, unstable baselines, and premature column wear. Staying below the recommended running pressure improves reliability and extends column life.

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### Avoid “Pressure Shock”

Sudden spikes—or rapid drops—can damage the packed bed and compromise performance. Best practice:

- Never remove column fittings until system pressure reads zero.
- Prevent rapid depressurization during solvent changes or method transitions.

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### Quick Checklist for Safe Operation

1. Monitor backpressure across the run; don't let it drift toward the limit.
2. Ramp gradients and flows smoothly to minimize sudden pressure changes.
3. Depressurize completely before disconnecting any fittings

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