

SPECIFICATION SHEET

CHRONECT™ HDX LC Columns

Workflow-optimized chromatography for modern HDX-MS

Lower pressure. Higher confidence.

Introduction

In HDX-MS workflows, chilled operation increases system pressure and can limit throughput, robustness, and confidence. CHRONECT HDX LC Columns are designed to reduce pressure burden while maintaining fit-for-purpose HDX separations — helping labs run faster, more robustly, and with better use of existing instrument time.

Key benefits

Run faster HDX methods

- Lower pressure creates room for increased flow in cleanup, re-equilibration, and — where appropriate — elution, enabling up to 40% runtime reduction after optimization.

Improve workflow robustness

- Lower operating pressure can reduce pressure-related workflow interruptions, leaks, and service burden, especially under chilled HDX conditions.

Increase practical throughput

- Shorter LC runtime helps labs fit more samples, replicates, and conditions into the same 20–24 hour operating window.

Support better data confidence

- Customers consistently describe the real value not only as speed, but as more capacity for replicates, confidence, and more effective use of scientist time.

Designed for HDX-MS workflows

CHRONECT HDX LC Columns are intended for:

- HDX-MS peptide separation
- higher-order structure characterization
- protein–ligand interaction studies
- protein conformational analysis
- comparability studies
- replicate-intensive and throughput-focused HDX workflows

Representative workflow impact

- Baseline LC runtime: **16.0 min**
- Optimized LC runtime: **12.5–10.5 min**
- Potential throughput increase: **~25–37%**
- Backpressure reduction: **up to ~40%**

Specification

Column family overview

CHRONECT HDX LC Columns are available in multiple dimensions to support different HDX workflow needs, from standard like-for-like implementation to higher-throughput and higher-sensitivity formats.

Format guidance

- 1.0 mm ID formats — standard / robust HDX workflows, easier implementation, stronger throughput focus
- 0.3 mm ID formats — lower sample amount / higher sensitivity workflows
- 0.15 mm ID formats — lower-flow / advanced workflows

Ordering information

Part number	Description
CHR-HD-LC-1001	CHRONECT HDX LC Column, 100 × 1.0 mm
CHR-HD-LC-501	CHRONECT HDX LC Column, 50 × 1.0 mm
CHR-HD-LC-100.3	CHRONECT HDX LC Column, 100 × 0.3 mm
CHR-HD-LC-50.3	CHRONECT HDX LC Column, 50 × 0.3 mm
CHR-HD-LC-150.15	CHRONECT HDX LC Column, 150 × 0.15 mm
CHR-HD-LC-50.15	CHRONECT HDX LC Column, 50 × 0.15 mm

Recommended starting point

For most customers, begin with a like-for-like replacement format relative to the current analytical column, then optimize further based on the primary need:

- **Need lower pressure / fewer service issues?**

Start with the same format, same method structure

Install into current workflow and confirm:

- lower pressure
- acceptable chromatography
- stable operation

- **Need faster throughput?**

Optimize cleanup and re-equilibration first

Increase flow in non-separation phases to recover runtime with low analytical risk

- **Need more sensitivity / lower sample use?**

Evaluate smaller ID formats with workflow support

Compatibility/workflow note

CHRONECT HDX LC Columns are designed for use in HDX workflows that prioritize:

- chilled operation
- robust low-pressure performance
- throughput optimization
- reproducible workflow execution
- efficient use of Chronos-enabled scheduling and overlap logic

For HDX-MS laboratories that need more throughput, better robustness, and greater confidence from limited instrument time, CHRONECT HDX LC Columns deliver lower-pressure chromatography that helps improve uptime, shorten runtime, and increase practical workflow capacity.

For further information, contact your Trajan CHRONECT representative or visit chronect.trajanscimed.com.