

## HPLC columns

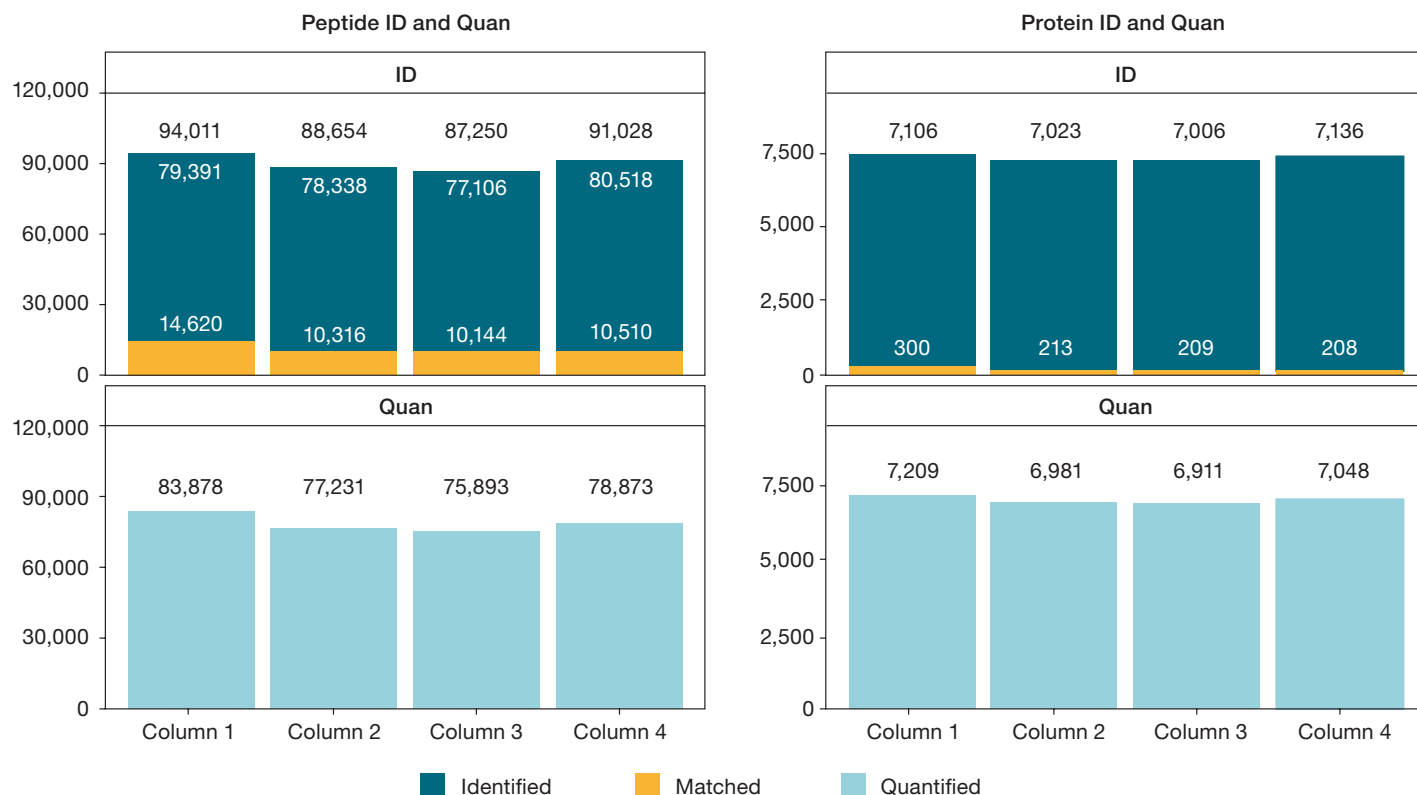
# EASY-Spray, single, and double nanoViper PepMap Neo columns

Peptide mapping with low-flow chromatography is ideal for high quality proteomics data, but it's often time-consuming and difficult. With Thermo Scientific™ EASY-Spray™, single nanoViper™ (SNV), and double nanoViper™ (DNV) PepMap™ Neo Columns, your connection to brilliant data just got simpler. Moreover, when you combine PepMap Neo columns with the long term, optimum performance of the Thermo Scientific™ Vanquish™ Neo UHPLC System, you can further increase proteome coverage.

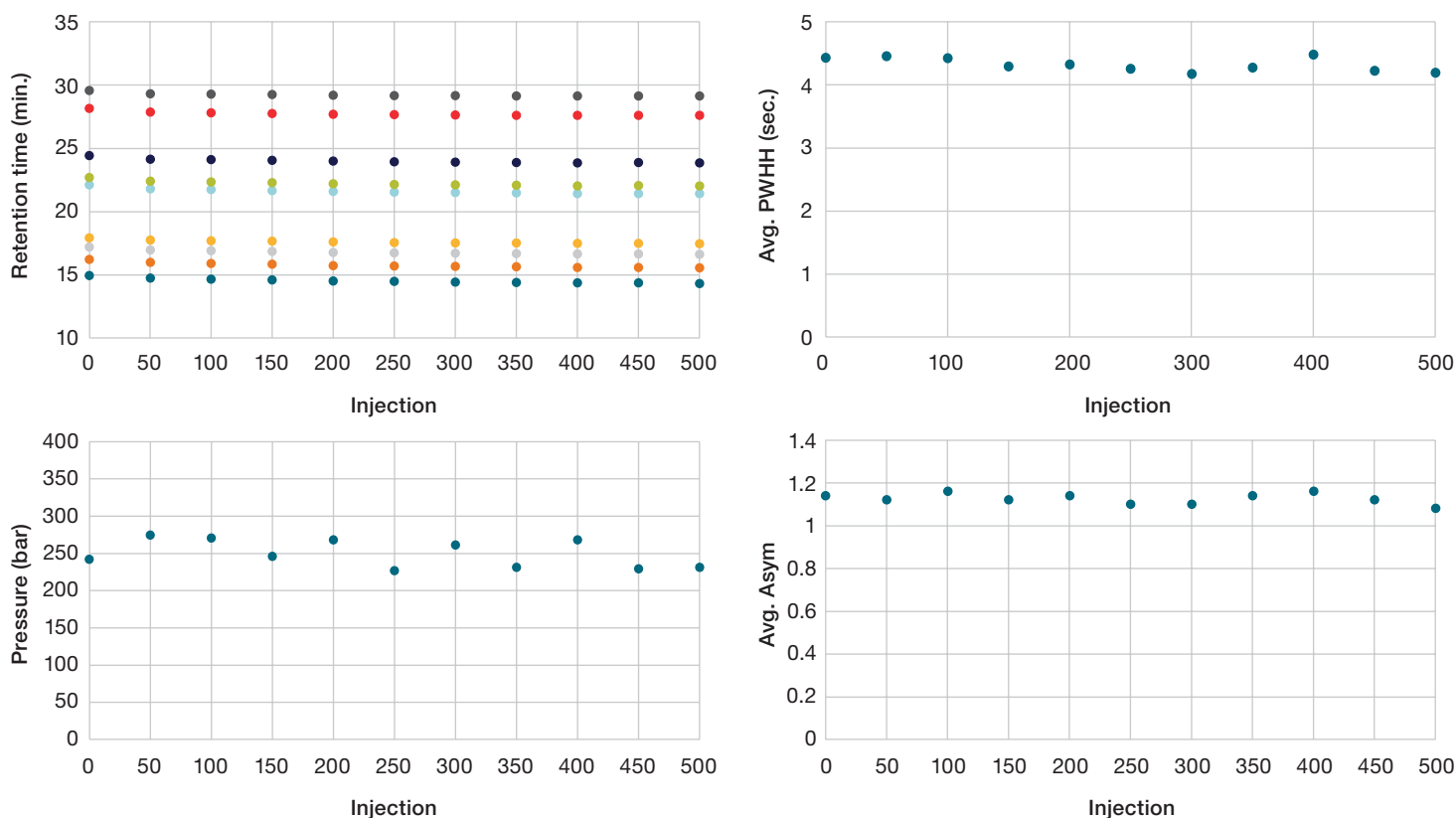
- **Brilliant connectivity**—EASY-Spray columns click into position with ease, single and double nanoViper column connections are equally as simple
- **Brilliant reproducibility**—Precise manufacturing protocols for packing media improve column-to-column consistency for reproducible analysis every day
- **Brilliant separation**—Ultra-high-pressure packing increases column efficiency, allowing you to run at up to 1500 bar for enhanced peak symmetry and resolution, providing higher sample capacity for more sample insights



## Column performance



**Reproducible identification and quantification using PepMap Neo columns:** HeLa peptides and proteins over four EASY-Spray PepMap Neo columns (ES75750PN, 75  $\mu$ m I.D.  $\times$  750 mm) while using the Vanquish Neo UHPLC system (direct injection workflow) coupled with the Thermo Scientific™ Orbitrap™ Exploris 480 Mass Spectrometer. The reproducibility of these columns has been reported in [Thermo Scientific Technical Note \(TN74152\)](#).



**PepMap Neo columns (ES75500PN, 75  $\mu$ m I.D.  $\times$  500 mm) offer excellent robustness:** Column ruggedness test from 500 injections with the direct injection workflow using 200 ng HeLa digest. The data shows consistent peak retention time, peak width, peak symmetry, and system pressure.

## EASY-Spray column

### Integrated column/emitter design

EASY-Spray columns provide a fully-integrated and temperature-controlled column/emitter design with only a single nanoViper connection between the LC outlet and the MS ion source. Designed to make easy zero-dead-volume (ZDV) connections every time for the best nano- or capillary-flow LC-MS performance. ZDV connections provide ultra-sharp peaks that deliver outstanding peak capacity and maximize peptide coverage for bottom-up proteomics research.

### Outstanding reproducibility and reliability

Column-to-column reproducibility is an extremely important parameter in proteomics, particularly when running large experiments or multi-site collaborations.

New high-pressure packing during manufacture and strict quality control ensures PepMap Neo columns deliver industry-leading reproducibility and reliability.

### Rugged performance to 1500 bar

EASY-Spray PepMap Neo columns are designed for use with the Vanquish Neo UHPLC system to fully harness the benefits of small particles and long columns to 1500 bar. The use of a nanoViper fitting provides simple, fingertight connection.

### EASY-Spray column features

#### 1. Precision positioned glass emitter

Quality controlled and polished fused silica emitter with a uniform inner diameter of 7  $\mu\text{m}$  delivers an exceptionally stable spray.

#### 2. Integrated ZDV union

Zero-dead-volume column to emitter connection delivers narrower peaks and maximized peak capacity, leading to improved sequence coverage.

#### 3. nanoViper fitting

Easy-to-use, 1500 bar fingertight fitting eliminates column damage due to over-tightening and poor experimental results due to bad connections.

4. Integrated column temperature control immediately before the MS inlet increases run-to-run reproducibility and allows the use of even longer columns and/or smaller particle sizes since elevated temperatures lower eluent viscosity and reduce the overall backpressure.

## Single and double nanoViper columns

### Union

NanoViper connections are designed to make the perfect ZDV connection every time for the best nano-flow LC-MS performance. Zero-dead-volumes provide ultra-sharp peaks, that deliver outstanding peak capacity and maximize peptide coverage.

### Outstanding reproducibility and reliability

Single and double nanoViper columns are packed using high pressure packing technology, like our EASY-Spray PepMap Neo columns, to deliver the same industry leading reproducibility and reliability.

New high pressure packing during manufacture and strict quality control ensures single and double nanoViper columns deliver class-leading reproducibility and reliability.

### Rugged performance to 1500 bar

Single and double nanoViper PepMap Neo columns are designed for use with nano- and capillary-flow LC separations to fully harness the benefits of small particles and long columns at 1500 bar. The nanoViper fittings afford simple, finger-tight connectivity at both the column inlet and column outlet.

### Single and double nanoViper column features

#### 1. Integrated zero-dead-volume union

Zero-dead-volume column to emitter connection delivers narrower peaks and maximized peak capacity, leading to improved sequence coverage.

#### 2. nanoViper fitting

Easy-to-use, 1500 bar fingertight fitting eliminates column damage due to over-tightening and poor experimental results due to bad connections.

Specification	
Column type	Reversed-phased
Endcapped	Yes
Packing material	Spherical, fully porous, ultrapure silica
Carbon load	15%
Phase	Reversed-phased
Max. pressure	22,000 psi (1500 bar)
Particle size	2 µm
pH	2 to 8
Pore size	100 Å
Surface area	450 m <sup>2</sup> /g
Temperature	60 °C
USP type	L1
Stationary phase	C18
For use with (Application)	Bottom-up proteomics

Find out more at [thermofisher.com/lowflowHPLCcolumns](https://thermofisher.com/lowflowHPLCcolumns)

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