

# Колонны ВЭЖХ Vela HPLC Columns

## Технические характеристики

По вопросам продаж и поддержки обращайтесь:

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## **New line of HPLC & UHPLC columns**



*The Fresh Breeze* of Chromatography

[teknokroma.es](http://teknokroma.es)

# SURFING ON THE CREST OF THE WAVE



## BENEFITS

- High-pressure endcapping method: 99% blockage of free silanols (HE).
- Verified true particle size.
- Maximized pore size utilization

## AVAILABLE PHASES

Reversed  
Phase

C18  
C18HTP  
C8  
C8HTP  
C18AQ  
Phenyl Hexyl  
Bi-Phenyl  
C30  
C4  
Amino-Sugar

Normal  
Phase

HILIC  
Phase

Si  
Cyano  
Amino  
  
DIOL  
EP4

## High-pressure HE endcapping method

To enhance chromatography, we employ a solvent-free high-pressure endcapping method, eliminating solvent contamination and solvent-induced interactions with analytes. Our endcapping achieves unprecedented levels of silanol blockage, effectively neutralizing these groups. We aim for 99% blockage, known as High Endcapping HE. This exceptional level of endcapping ensures that silanols have a negligible impact on separations, particularly in high-efficiency (HE) applications where non-specific interactions can profoundly influence resolution.

## Particle Size Dispersion: A Critical Factor for Enhanced HPLC and UHPLC Performance

In high-performance liquid chromatography (HPLC) and ultra-high-performance liquid chromatography (UHPLC), particle size distribution plays a pivotal role in determining separation efficiency, peak resolution, and overall chromatographic performance. Conventional particle size measurement methods often fall short, leading to inconsistent results and unreliable data. Our innovative approach to particle size verification, utilizing advanced laser diffraction technology, precisely measures the true particle size distribution in our silica packing materials, ensuring that the actual particle size falls within a narrow range, unlike the broader range of industry standards. By meticulously controlling particle size distribution, we guarantee exceptional chromatographic performance and data reliability, enabling you to achieve unparalleled separation efficiency, peak resolution, and reproducible results.

## HPLC: Sharper Peaks, Faster Separations

We guarantee monodisperse columns with a tightly controlled particle size distribution, ensuring that the particle size does not exceed the specified value.

- This monodisperse particle size distribution translates into several key benefits, including enhanced separation efficiency:
- Mayor Eficiencia de Separación: Rangos de tamaño de partícula más estrechos conducen a un empaquetado más uniforme, permitiendo velocidades de flujo más rápidas y eficiencias más altas. Esto se traduce en picos más definidos y tiempos de análisis más rápidos.
- Reduced Peak Broadening: A consistent particle size significantly minimizes peak broadening. This leads to more symmetrical peaks, improving chromatographic reproducibility and precision.
- Lower Operating Pressures: Thanks to the monodispersity of the particles, there is also less preferential path formation for the analyte. This results in lower operating pressures, further enhancing chromatographic performance.



## UHPLC: Unveiling the Finest Separation Details

As we venture deeper into the realm of UHPLC, the demands for peak resolution and sensitivity soar. Our 1.7 $\mu$ m silica columns rise to the challenge, delivering exceptional chromatographic performance.

- **Unprecedented Peak Resolution:** The particle size of our UHPLC column packing delivers unparalleled peak resolution, enabling the separation of even the most closely related compounds. This is crucial for complex mixtures and demanding applications.
- **Extreme Sensitivity:** By minimizing peak broadening and maximizing analyte interaction time, our 1.7 $\mu$ m columns achieve exceptional sensitivity, enabling trace-level analyte detection with remarkable precision.
- **Reproducible Excellence:** The consistent particle size distribution ensures that column performance remains constant from batch to batch, eliminating variability and enhancing overall reproducibility. This translates into reliable results and reproducible experiments.

## Sílica HE: Liberando el verdadero potencial de la Sílica porosa

HE silica maximizes pore utilization by effectively blocking surface silanols. This ensures that more analytes can access the internal surface of the silica particles, leading to:

- **Peak Efficiency:** Achieve sharper, narrower peaks and improved resolution for superior separations.
- **Tailing Reduction:** Eliminate peak tailing and broadening for cleaner, more symmetrical peaks.
- **Enhanced Sensitivity:** Increase retention times for enhanced sensitivity and improved detection limits.
- **Consistent Performance:** Deliver consistent results batch-to-batch, facilitating more reliable work methods.

## TECHNICAL SPECIFICATIONS

- **Dimensions:** All standard dimensions
- **Long:** 5, 10, 15, 25
- **ID:** 2.1, 3, 4, 4.6, 10, 21.2
- **Porosity:** 100 Å, C30 200 Å, C4 300 Å
- **Particle Size:** 1.7  $\mu$ m, 3  $\mu$ m, 5  $\mu$ m
- **Solvent Compatibility:** Wide range of organic and aqueous solvents
- **Silanol low activity:** 99.99%
- **Metallic Impurities (Na, Mg, Al, Ca, Fe, Zr, Ti):** Less than 10 ppm of each one
- **particle substrate:** Spherical Silica
- **Surface Area:** 315 m<sup>2</sup>/g
- **Pore Volume:** 0.8 ml/g

## APPLICATIONS:

- Pharmaceutical: Drug and metabolite analysis
- Environmental: Detection of organic contaminants
- Food: Quality control of food and beverages
- Applications Requiring Method Robustness in HPLC

## TECHNICAL SPECIFICATIONS

Bonding Phase	C8	C8HTP	C8AQ	C18	C18HTP	C18AQ	PH	BIP	C30	C4	AMINO-SUGAR
Separation Mode	Reverse Phase RP										
Carbon Load	11%	11%	11%	16 %	18 %	14%	14 %	12 %	11 %	7 %	3%
pH Range	2 to 9	1 to 9	2 to 10	2 to 11	1 to 11	2 to 10	2 to 9	2 to 9	2 to 8	2 to 8	2 to 8
Endcapped	HE	HE	HE	HE	HE	HE	HE	HE	HE	NE	NE
Particle size	3µm, 5µm, 1,7µm	3µm, 5µm, 1,7µm	3µm, 5µm, 1,7µm	3µm, 5µm, 1,7µm	3µm, 5µm, 1,7µm	3µm, 5µm, 1,7µm	5µm, 1,7µm	5µm	5µm	5µm	5µm
Pore Diameter	100 Å	100 Å	100 Å	100 Å	100 Å	100 Å	100 Å	100 Å	200 Å	300 Å	100 Å
USP	L7	L7	L7	L1	L1	L1	L11	L11	L62	L26	L8

Bonding Phase	SI	CN	NH2	DIOL	EP4
Separation Mode	Normal Phase NP			HILIC	
Carbon Load	0 %	7 %	4 %	10%	8 %
pH Range	2 to 8	2 to 8	2 to 8	2 to 8	1 to 8
Endcapped	NE	NE	NE	NE	NE
Particle size	5µm	5µm	5µm	5µm	5µm
Pore Diameter	100 Å	100 Å	100 Å	100 Å	100 Å
USP	L3	L10	L8	L20	-

## HPLC ORDERING INFORMATIONIAS

• TR-050157	C18	3 µm x 4,6 x 15 cm
• TR-050277	C18	5 µm x 4,6 x 25 cm
• TR-052157	C18HTP	3 µm x 4,6 x 15 cm
• TR-052277	C18HTP	5 µm x 4,6 x 25 cm
• TR-05B157	C8	3 µm x 4,6 x 15 cm
• TR-05B277	C8	5 µm x 4,6 x 25 cm
• TR-057157	C8HTE	3 µm x 4,6 x 15 cm
• TR-057277	C8HTE	5 µm x 4,6 x 25 cm
• TR-051157	C18AQ	3 µm x 4,6 x 15 cm
• TR-051277	C18AQ	5 µm x 4,6 x 25 cm
• TR-055277	PH	5 µm x 4,6 x 25 cm
• TR-056277	BIP	5 µm x 4,6 x 25 cm
• TR-058277	C30	5 µm x 4,6 x 25 cm
• TR-05F277	C4	5 µm x 4,6 x 25 cm
• TR-05G157	Amino-S	3 µm x 4,6 x 15 cm
• TR-05G277	Amino-S	5 µm x 4,6 x 25 cm
• TR-05H277	Si	5 µm x 4,6 x 25 cm
• TR-054277	NH <sub>2</sub>	5 µm x 4,6 x 25 cm
• TR-053277	CN	5 µm x 4,6 x 25 cm
• TR-05J277	DIOL	5 µm x 4,6 x 25 cm
• TR-059277	EP4	5 µm x 4,6 x 25 cm

## UHPLC ORDERING INFORMATION

• TR-050017	C18	1,7 µm x 4,6 x 5 cm
• TR-050011	C18	1,7 µm x 2,1 x 5 cm
• TR-052017	C18HTP	1,7 µm x 4,6 x 5 cm
• TR-052011	C18HTP	1,7 µm x 2,1 x 5 cm
• TR-05C017	C8	1,7 µm x 4,6 x 5 cm
• TR-05C011	C8	1,7 µm x 2,1 x 5 cm
• TR-057017	C8HTP	1,7 µm x 4,6 x 5 cm
• TR-057011	C8HTP	1,7 µm x 2,1 x 5 cm
• TR-051017	C18AQ	1,7 µm x 4,6 x 5 cm
• TR-051011	C18AQ	1,7 µm x 2,1 x 5 cm
• TR-056017	BIP	1,7 µm x 4,6 x 5 cm
• TR-056011	BIP	1,7 µm x 2,1 x 5 cm

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