

Foresight Pro Columns

Process-Scale Prepacked Chromatography Columns



Process-Scale CHT™ Prepacked Chromatography Columns

Foresight Pro Columns are prepacked with CHT Ceramic Hydroxyapatite Media. The columns are good manufacturing practice (GMP) ready and have been specifically designed for the production-scale manufacture of biologics. This includes a broad range of purification and polishing applications for vaccines, monoclonal antibodies, and recombinant proteins. These prepacked columns offer a more cost-effective solution than traditional “pack in place” designs. A variety of diameters and bed heights are available to choose from. The columns have a sanitary design with minimal dead space and effective cleanability, and connections to pumping systems are made via standard 3/4" Tri-Clamp Fittings.



Key Benefits

- Convenience — single-source supplier for technical support and columns prepacked with CHT Media
- Range of column diameters and bed heights — 5–33 cm ID and 10 or 20 cm bed height
- GMP ready columns — validated and ready to use
- Standard Tri-Clamp connections — plug and play
- Robust design ensures quality packing and has been validated through ISTA 2A tests
- Excellent performance — data include asymmetry, HETP, endotoxin, and bioburden
- Regulatory support file available
- All materials in direct fluid contact path meet USP Class VI according to USP <88> Biological Reactivity Test
- Consistent performance through all offered dimensions
- Columns are packed in a controlled ISO Class 7 cleanroom
- Resin reference sample included with each column

ID, inner diameter; ISTA, International Safe Transit Association; HETP, height equivalent to a theoretical plate; USP, United States Pharmacopeia; ISO, International Organization for Standardization.

Foresight Pro Column dimensions available with CHT Ceramic Hydroxyapatite Type I, CHT Type II, and CHT XT Media (40 µm particle size).

Column ID, cm	Column Bed Height, cm	Column Bed Volume, L
5	10	0.2
5	20	0.4
8	10	0.5
8	20	1
10	10	0.8
10	20	1.5
13	10	1.3
13	20	2.7
20	10	3.1
20	20	6.3
24	10	4.5
24	20	9
33	10	8.5
33	20	17

ID, inner diameter.

Packed column specifications.

Criterion	Value
Number of theoretical plates per meter, N/m	≥4,800
Column asymmetry, A_s	$0.80 \leq A_s \leq 2.2$
Microbial bioburden, CFU/ml	<10
Endotoxin level, EU/ml	<0.25

CFU, colony forming units; EU, endotoxin units.

Material contact summaries.

Nonproduct Contact Material Summary

Element	Material
Top and bottom column plungers	Polypropylene
Holding bolt	Polyamide or 304 stainless steel

Product Contact Material Summary

Element	Material	USP <88> Biological Reactivity Test	U.S. FDA 21 CFR Part 177	Animal Origin
Column body (5 cm ID columns)	Glass	N/A	N/A	N/A
Column body (8, 10, 13, 20, 24, 33 cm ID columns)	Acrylic	Class VI	177.1010	Animal-free
Flow distributors	Polypropylene	Class VI	177.1520	Animal-free
Inlet and outlet connectors	Polypropylene	Class VI	177.1520	Animal-free
Tubing connections	Reinforced elastomer tubing	Class VI	177.2600	Animal-free
O-rings	Viton	Class VI	177.2600	Animal-free
Tri-Clamp Gasket	Ethylene propylene diene monomer (EPDM)	Class VI	177.2600	Animal-free
Bed support screens	Polyamide*	Class VI	177.1500	Animal-free

* The polyamide bed support screen is welded to the polypropylene flow distributor without using any extra chemicals.

CFR, Code of Federal Regulations; EMEA, Europe, the Middle East, and Africa; FDA, Food and Drug Administration; ID, inner diameter; N/A, not applicable.



Foresight Pro Columns.

Ordering Information

Catalog #	Description
Foresight Pro Column, CHT Type I, 40 µm	
12014659	Foresight Pro Column , CHT Type I, 40 µm, 0.2 L, 5 cm ID x 10 cm length
12014660	Foresight Pro Column , CHT Type I, 40 µm, 0.4 L, 5 cm ID x 20 cm length
12014671	Foresight Pro Column , CHT Type I, 40 µm, 0.5 L, 8 cm ID x 10 cm length
12014672	Foresight Pro Column , CHT Type I, 40 µm, 1.0 L, 8 cm ID x 20 cm length
12014673	Foresight Pro Column , CHT Type I, 40 µm, 0.8 L, 10 cm ID x 10 cm length
12014674	Foresight Pro Column , CHT Type I, 40 µm, 1.5 L, 10 cm ID x 20 cm length
12014675	Foresight Pro Column , CHT Type I, 40 µm, 1.3 L, 13 cm ID x 10 cm length
12014676	Foresight Pro Column , CHT Type I, 40 µm, 2.7 L, 13 cm ID x 20 cm length
12014677	Foresight Pro Column , CHT Type I, 40 µm, 3.1 L, 20 cm ID x 10 cm length
12014678	Foresight Pro Column , CHT Type I, 40 µm, 6.3 L, 20 cm ID x 20 cm length
12014679	Foresight Pro Column , CHT Type I, 40 µm, 4.5 L, 24 cm ID x 10 cm length
12014680	Foresight Pro Column , CHT Type I, 40 µm, 9.0 L, 24 cm ID x 20 cm length
12014681	Foresight Pro Column , CHT Type I, 40 µm, 8.5 L, 33 cm ID x 10 cm length
12014682	Foresight Pro Column , CHT Type I, 40 µm, 17 L, 33 cm ID x 20 cm length
Foresight Pro Column, CHT Type II, 40 µm	
12014697	Foresight Pro Column , CHT Type II, 40 µm, 0.2 L, 5 cm ID x 10 cm length
12014698	Foresight Pro Column , CHT Type II, 40 µm, 0.4 L, 5 cm ID x 20 cm length
12014699	Foresight Pro Column , CHT Type II, 40 µm, 0.5 L, 8 cm ID x 10 cm length
12014700	Foresight Pro Column , CHT Type II, 40 µm, 1.0 L, 8 cm ID x 20 cm length
12014701	Foresight Pro Column , CHT Type II, 40 µm, 0.8 L, 10 cm ID x 10 cm length
12014702	Foresight Pro Column , CHT Type II, 40 µm, 1.5 L, 10 cm ID x 20 cm length
12014703	Foresight Pro Column , CHT Type II, 40 µm, 1.3 L, 13 cm ID x 10 cm length
12014704	Foresight Pro Column , CHT Type II, 40 µm, 2.7 L, 13 cm ID x 20 cm length
12014705	Foresight Pro Column , CHT Type II, 40 µm, 3.1 L, 20 cm ID x 10 cm length
12014706	Foresight Pro Column , CHT Type II, 40 µm, 6.3 L, 20 cm ID x 20 cm length
12014707	Foresight Pro Column , CHT Type II, 40 µm, 4.5 L, 24 cm ID x 10 cm length
12014708	Foresight Pro Column , CHT Type II, 40 µm, 9.0 L, 24 cm ID x 20 cm length
12014709	Foresight Pro Column , CHT Type II, 40 µm, 8.5 L, 33 cm ID x 10 cm length

Catalog #	Description
12014710	Foresight Pro Column , CHT Type II, 40 µm, 17 L, 33 cm ID x 20 cm length
Foresight Pro Column, CHT XT, 40 µm	
12014725	Foresight Pro Column , CHT XT, 40 µm, 0.2 L, 5 cm ID x 10 cm length
12014726	Foresight Pro Column , CHT XT, 40 µm, 0.4 L, 5 cm ID x 20 cm length
12014727	Foresight Pro Column , CHT XT, 40 µm, 0.5 L, 8 cm ID x 10 cm length
12014728	Foresight Pro Column , CHT XT, 40 µm, 1.0 L, 8 cm ID x 20 cm length
12014729	Foresight Pro Column , CHT XT, 40 µm, 0.8 L, 10 cm ID x 10 cm length
12014730	Foresight Pro Column , CHT XT, 40 µm, 1.5 L, 10 cm ID x 20 cm length
12014731	Foresight Pro Column , CHT XT, 40 µm, 1.3 L, 13 cm ID x 10 cm length
12014732	Foresight Pro Column , CHT XT, 40 µm, 2.7 L, 13 cm ID x 20 cm length
12014733	Foresight Pro Column , CHT XT, 40 µm, 3.1 L, 20 cm ID x 10 cm length
12014734	Foresight Pro Column , CHT XT, 40 µm, 6.3 L, 20 cm ID x 20 cm length
12014735	Foresight Pro Column , CHT XT, 40 µm, 4.5 L, 24 cm ID x 10 cm length
12014736	Foresight Pro Column , CHT XT, 40 µm, 9.0 L, 24 cm ID x 20 cm length
12014737	Foresight Pro Column , CHT XT, 40 µm, 8.5 L, 33 cm ID x 10 cm length
12014738	Foresight Pro Column , CHT XT, 40 µm, 17 L, 33 cm ID x 20 cm length

Visit bio-rad.com/ForesightProColumn for more information on Foresight Pro Columns.

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