

Tricorn Empty High Performance Columns

Tricorn™ columns incorporate modern design and high performance to increase the user friendliness and reliability of the chromatography column. Tricorn columns are designed for high resolution liquid chromatography of biomolecules performed at medium to high pressures.

- High performance glass columns designed for reliable high resolution, reproducibility and durability
- New longer adaptor for increased adjustment of bed height
- Modern, integrated design – simple to assemble, pack, operate, and maintain
- Broad range of column dimensions – suitable for many different purification needs
- Safety first – glass tubes coated with plastic film to protect laboratory personnel if the column is dropped or operated outside its specifications
- Locking ring – prevents accidental compression of media bed
- Separate packing connector – allows simple column packing for a broad range of media

The columns

Tricorn columns are simple to use, with Valco™ fittings for quick connection to ÄKTAdesign™ and other high performance LC systems, and can be run according to their specifications where the systems have the appropriate pressure capacity. Eluent is evenly distributed over the entire column cross section to enable high resolution separations while dead volumes are minimized, which reduces band broadening, and maintains the high resolution of the separation.

A moveable adaptor simplifies adjustment of the bed height and maintenance, and a locking ring protects the medium bed from compression by accidental turning of the adaptor.



Fig. 1 Tricorn empty high performance columns.

The triangular shape of the adaptor prevents the column from rolling off the laboratory bench. The tube is made of glass, which allows visual inspection of the media bed. The columns are externally coated with protective plastic film to protect the tube and for personal safety.

Designed with few parts, Tricorn columns are robust and simple to assemble. They are made of biocompatible materials that exhibit excellent chemical resistance. Column packing is accomplished with a simple packing connector, assuring a properly packed medium bed. A broad range of column dimensions make Tricorn columns suitable for many different purification needs.

The columns are available with inner diameters of 5 and 10 mm, and in lengths from 20 to 200 mm. Column lengths of 300 and 600 mm are also available for the



Bed Volumes and Heights

Tricorn Column	Column Size i.d. (mm)	With one adaptor		With two adaptors	
		Volume (ml)	Bed Height (mm)	Volume (ml)	Bed height (mm)
Tricorn 5/20	5	0.10–0.57	5–29	0.00–0.52	0–26
Tricorn 5/50	5	0.69–1.16	35–59	0.16–1.11	8–56
Tricorn 5/100	5	1.67–2.14	85–109	1.15–2.09	58–106
Tricorn 5/150	5	2.65–3.12	135–159	2.13–3.07	108–156
Tricorn 5/200	5	3.63–4.11	185–209	3.11–4.05	158–206
Tricorn 10/20	10	0.00–2.29	0–29	0.00–2.07	0–26
Tricorn 10/50	10	2.29–4.64	29–59	0.00–4.43	0–56
Tricorn 10/100	10	6.21–8.57	79–109	3.64–8.36	46–106
Tricorn 10/150	10	10.14–12.50	129–159	7.57–12.28	96–156
Tricorn 10/200	10	14.07–16.42	179–209	11.50–16.21	146–206
Tricorn 10/300	10	21.92–24.28	279–309	19.35–24.06	246–306
Tricorn 10/600	10	45.48–47.84	579–609	42.91–47.63	546–606

10-mm diameter column. The columns are ideal for high performance media such as Sepharose™ High Performance, Superdex™ prep grade, and SOURCE™. When working with Capture media such as Capto™, MabSelect™ or Sepharose Fast Flow the Tricorn Coarse Filter kit is recommended to reduce the risk of clogging.

Prepacked columns

Tricorn columns are also offered prepacked with the following high performance media: MonoBeads™, MiniBeads™, SOURCE 15Q and 15S, SOURCE 15PHE, Superdex, and Superose™.

Technical Specifications

Materials in contact with eluent	Borosilicate glass, PEEK, PP, EPDM and PFR*	
Column dimensions (inner diameter × length), mm	5 × 20	10 × 20
	5 × 50	10 × 50
	5 × 100	10 × 100
	5 × 150	10 × 150
	5 × 200	10 × 200
		10 × 300
		10 × 600
Max. operating pressure		
Tricorn 5	10 MPa, 100 bar, 1450 psi	
Tricorn 10	5 MPa, 50 bar, 725 psi	
Operating temperature	+4 to +40 °C	

* PP = polypropylene
PEEK = polyetheretherketone
EPDM = ethylene propylene diene monomer
PFR = perfluoro-rubber

Ordering information

All columns are delivered with a column tube, adaptor unit, end cap, Tricorn filter kit, two stop plugs, two fingertight connectors, two M6 connectors, adaptor lock, and filter holder. The exploded diagram in Figure 2. shows the positions of the different parts of the column.

Packing Tricorn columns is simplified with the use of Tricorn packing equipment or a Tricorn packing connector and the appropriate glass tube.

Tricorn packing connector includes one packing connector with 2 EPDM o-rings. Packing connectors 5–5 and 10–10 are the same size on each side of the connector. Packing connector 5–10 accommodates a 5-mm tube on one side and a 10-mm tube on the other side.

Tricorn Packing Equipment includes the packing connector (with EPDM o-rings), glass tube (to be used as a packing reservoir), and bottom unit with filter holder and cap. Packing Equipment 5/50 includes a 5-mm packing connector and 50-mm glass tube. Packing Equipment 10/100 includes a 10-mm packing connector and 100-mm glass tube (Fig 3).

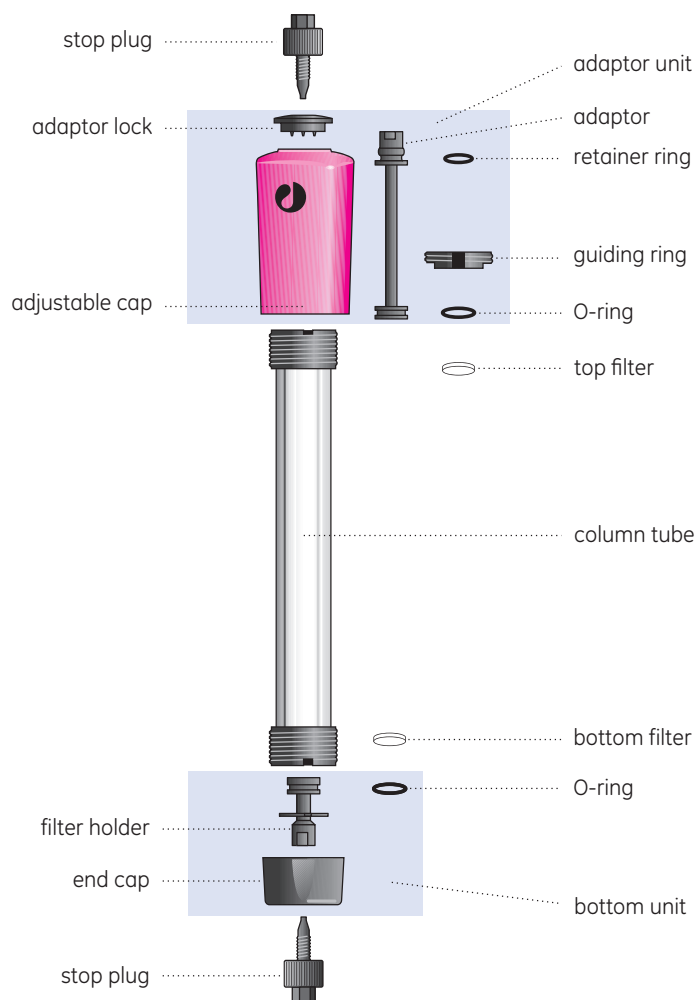


Fig. 2. Tricorn empty column.

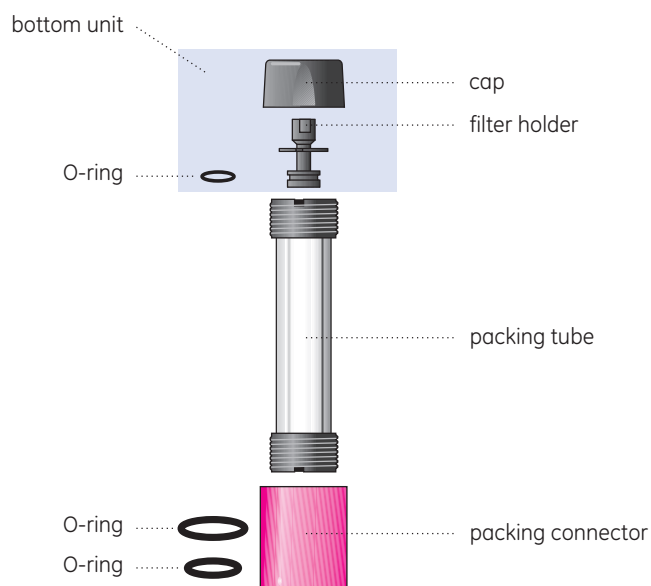


Fig. 3. Tricorn packing equipment.

Columns

Product	Quantity	Code No.
Tricorn 5/20 column	1	28-4064-08
Tricorn 5/50 column	1	28-4064-09
Tricorn 5/100 column	1	28-4064-10
Tricorn 5/150 column	1	28-4064-11
Tricorn 5/200 column	1	28-4064-12
Tricorn 10/20 column	1	28-4064-13
Tricorn 10/50 column	1	28-4064-14
Tricorn 10/100 column	1	28-4064-15
Tricorn 10/150 column	1	28-4064-16
Tricorn 10/200 column	1	28-4064-17
Tricorn 10/300 column	1	28-4064-18
Tricorn 10/600 column	1	28-4064-19

Accessories

Product	Quantity	Code No.
Tricorn packing connector 5-5	1	18-1153-21
Tricorn packing connector 5-10	1	18-1153-22
Tricorn packing connector 10-10	1	18-1153-23
Tricorn packing equipment 5/50	1	18-1153-24
Tricorn packing equipment 10/100	1	18-1153-25
Tricorn 5/20 glass tube	1	18-1153-04
Tricorn 5/50 glass tube	1	18-1153-05
Tricorn 5/100 glass tube	1	18-1153-06
Tricorn 5/150 glass tube	1	18-1153-07
Tricorn 5/200 glass tube	1	18-1153-08
Tricorn 10/20 glass tube	1	18-1153-13
Tricorn 10/50 glass tube	1	18-1153-14
Tricorn 10/100 glass tube	1	18-1153-15
Tricorn 10/150 glass tube	1	18-1153-16
Tricorn 10/200 glass tube	1	18-1153-17
Tricorn 10/300 glass tube	1	18-1153-18
Tricorn 10/600 glass tube	1	18-1153-19
Tricorn 5 adaptor unit	1	28-4064-06
Tricorn 5 bottom unit	1	18-1153-01
Tricorn 10 adaptor unit	1	28-4064-07
Tricorn 10 bottom unit	1	18-1153-10
Tricorn 5 Filter Kit*	1	18-1153-02
Tricorn 10 Filter Kit*	1	18-1153-11
Tricorn 5 Coarse Filter Kit**	1	11-0012-53
Tricorn 10 Coarse Filter Kit**	1	11-0012-54
Filter Tool	1	18-1153-20
Tricorn adaptor lock	2	18-1153-27
Tricorn O-ring packing kit***	1	18-1152-82
Solvent resistant O-rings		
O-ring 3 × 1 PFR (5-mm columns)	2	18-1153-03
O-ring 7 × 1 PFR (10-mm columns and 5-mm packing connector)	2	18-1153-12
O-ring 12 × 1 PFR (10-mm packing connector)	2	18-1153-26
Column Packing – The Movie	1	18-1165-33

* Tricorn 5 and 10 Filter Kits include top and bottom filters and EPDM O-rings, 5 of each.

** Tricorn Coarse Filter Kit is used for large volume/repeated loading of clarified sample to reduce the risk of clogging in combination of capture media. The kit includes top and bottom filters and EPDM O-rings, 5 of each.

*** Tricorn O-ring packing kit includes O-ring 7 × 1 mm EPDM and O-ring 12 × 1 mm EPDM, 2 of each.

www.gehealthcare.com/protein-purification

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