

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 adapter 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 resins bed
- Separate packing connector — allows simple column packing for a broad range of resins

The columns

Tricorn™ columns are simple to use, with Valco™ fittings for quick connection to ÄKTA™ chromatography systems 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 adapter simplifies adjustment of the bed height and maintenance, and a locking ring protects the resin bed from compression by accidental turning of the adapter. The triangular shape of the adapter prevents the column from



Fig 1. Tricorn™ empty high performance columns.

rolling off the laboratory bench. The tube is made of glass, which allows visual inspection of the resins 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 resin bed. A broad range of column dimensions make Tricorn™ columns suitable for many different purification needs.

Bed volumes and heights

Tricorn™ column	Column size i.d. (mm)	With one adapter		With two adapters	
		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

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 10 mm diameter column. The columns are ideal for high performance resins such as Sepharose™ High Performance, Superdex™ prep grade, and SOURCE™. When working with products such as Captio™, MabSelect™ or Sepharose™ Fast Flow capture resins, use the Tricorn™ coarse filter kit to reduce the risk of clogging. For the purification mAbs in combination with products such as MabSelect SuRe™ pcc or MabSelect Prisma™ resins, use the Tricorn™ medium filter kit.

Prepacked columns

Tricorn™ columns are also offered prepacked with a number of high performance resins.

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°C 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, adapter unit, end cap, Tricorn™ filter kit, two stop plugs, two fingertight connectors, two M6 connectors, adapter 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).

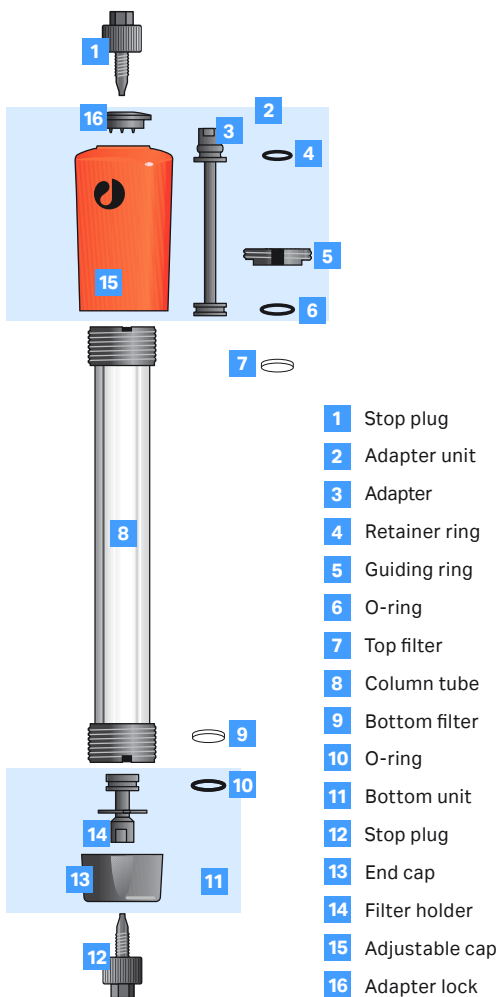


Fig 2. Tricorn™ empty column.

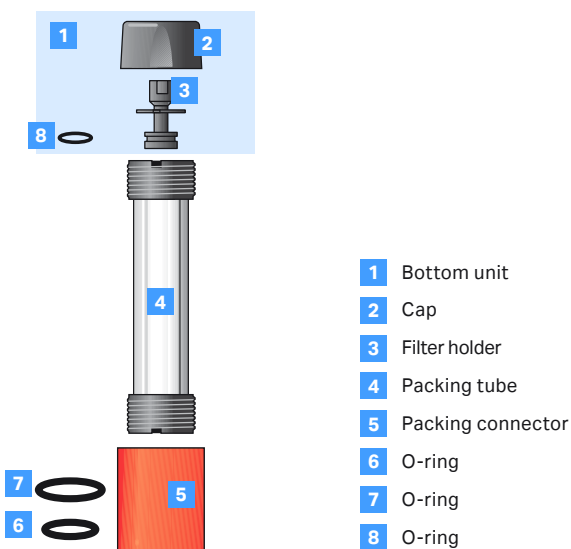


Fig 3. Tricorn™ packing equipment.

Columns

Product	Quantity	Product code
Tricorn™ 5/20 column	1	28406408
Tricorn™ 5/50 column	1	28406409
Tricorn™ 5/100 column	1	28406410
Tricorn™ 5/150 column	1	28406411
Tricorn™ 5/200 column	1	28406412
Tricorn™ 10/20 column	1	28406413
Tricorn™ 10/50 column	1	28406414
Tricorn™ 10/100 column	1	28406415
Tricorn™ 10/150 column	1	28406416
Tricorn™ 10/200 column	1	28406417
Tricorn™ 10/300 column	1	28406418
Tricorn™ 10/600 column	1	28406419

Accessories

Product	Quantity	Product code
Tricorn™ packing connector 5-5	1	18115321
Tricorn™ packing connector 5-10	1	18115322
Tricorn™ packing connector 10-10	1	18115323
Tricorn™ packing equipment 5/50	1	18115324
Tricorn™ packing equipment 10/100	1	18115325
Tricorn™ 5/20 glass tube	1	18115304
Tricorn™ 5/50 glass tube	1	18115305
Tricorn™ 5/100 glass tube	1	18115306
Tricorn™ 5/150 glass tube	1	18115307
Tricorn™ 5/200 glass tube	1	18115308
Tricorn™ 10/20 glass tube	1	18115313
Tricorn™ 10/50 glass tube	1	18115314
Tricorn™ 10/100 glass tube	1	18115315
Tricorn™ 10/150 glass tube	1	18115316
Tricorn™ 10/200 glass tube	1	18115317
Tricorn™ 10/300 glass tube	1	18115318
Tricorn™ 10/600 glass tube	1	18115319
Tricorn™ 5 adapter unit	1	28406406
Tricorn™ 5 bottom unit	1	18115301
Tricorn™ 10 adapter unit	1	28406407
Tricorn™ 10 bottom unit	1	18115310
Tricorn™ 5 filter kit*	1	29053586
Tricorn™ 10 filter kit*	1	29053612
Tricorn™ 5 medium filter kit [†]	1	29258131
Tricorn™ 10 medium filter kit [†]	1	29258132
Tricorn™ 5 coarse filter kit [‡]	1	11001253
Tricorn™ 10 coarse filter kit [‡]	1	11001254
Filter tool	1	18115320
Tricorn™ adapter lock	2	18115327
Tricorn™ O-ring packing kit [§]	1	18115282
Solvent resistant O-rings	2	18115303
O-ring 3 × 1 PFR (5 mm columns)		
O-ring 7 × 1 PFR (10 mm columns and 5 mm packing connector)	2	18115312
O-ring 12 × 1 PFR (10 mm packing connector)	2	18115326

* Tricorn™ 5 and 10 filter kits include top and bottom filters and EPDM O-rings, 5 of each.

[†] Use the medium 18 µm porosity filter kit for the purification of polyclonal IgG antibodies or mAbs in combination with products such as MabSelect SuRe™ pcc or MabSelect Prisma™ resins.

[‡] Tricorn™ coarse filter kit is used for large volume/repeated loading of clarified sample to reduce the risk of clogging in combination of capture resins. 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.

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The Tricorn column and components are protected by US design patents USD500856, USD506261, USD500555, USD495060 and their equivalents in other countries.

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