

INdEX™ columns

CHROMATOGRAPHY COLUMNS

INdEX™ is a range of general-purpose glass columns developed for process development and diagnostic production (Fig 1).

A key benefit of INdEX™ columns is the simplicity of operation. A novel packing method with an adjustable, hydraulic adaptor makes column packing a fast, efficient, and reproducible procedure. Column assembly and cleaning are very straightforward owing to the few components parts.

INdEX™ columns are characterized by:

- Hydraulic adaptor
- Fast and easy packing
- Pressure rating of 3 bar

General description

- Inner diameters of 70, 100, 140, and 200 mm
- Low flow resistance
- Capacity to offer a range of bed heights and volumes (see Table 1)
- Suitable for use in ion exchange, gel filtration, affinity and hydrophobic interaction chromatography
- Tubing connections made with hygienic sanitary clamp fittings
- Adaptor and end-piece connections have an inner diameter of 6 mm



Fig 1. INdEX™ chromatography columns are a range of general-purpose glass columns developed for process development and diagnostic production.

- All gaskets made of ethylene propylene diene (EPDM) rubber
- Instruction manual containing full details of components, packing, testing, procedures for cleaning and trouble shooting, as well as a spare parts list

Table 1. Specifications and working characteristics of INdEX™ columns

Column Diam. (mm)	Cross sectional area (cm ²)	Tube height (cm)	Bed height (cm)		Bed volume (l)		Max. pressure (bar)***
			min.	max.*	min.	max.**	
70	38	50	3	32 (41)	0.0	1.2 (1.6)	3
70	38	95	48	61 (79)	1.9	2.3 (3.0)	3
100	79	50	3	32 (41)	0.2	2.5 (3.2)	3
100	79	95	48	61 (79)	3.8	4.8 (6.2)	3
140	154	50	3	32 (41)	0.5	4.9 (6.3)	3
140	154	95	48	61 (79)	7.4	9.4 (12.2)	3
200	314	50	3	32 (41)	0.9	10.5 (12.9)	3
200	314	95	48	61 (79)	15.1	19.2 (24.8)	3

* Maximum bed volumes and bed heights are based on a slurry concentration of 75% and a packing compression of 15%.

** The figures within brackets are achievable using a packing device.

*** Use a manometer to monitor the pressure.

Column tube

- Manufactured from calibrated precision borosilicate glass
- Exact internal diameter tolerance of the glass tube
- Thin O-ring between the column tube and adaptor/end-piece forms a very tight seal
- Minimum dead volume
- Liquid distribution over a large surface area

Adaptor

- Hydraulic operation for fast and easy packing
- Offers an efficient and reproducible packing method
- Lowered under constant pressure, which results in faster and harder packing of the chromatographic medium

Efficient liquid distribution

- Adaptors and end-pieces based on the well-proven design of a single inlet/outlet channel
- Support nets with a coarse, open structure distribute liquid from the central inlet rapidly and uniformly over the entire surface area
- Thin nets maintain even pressure distribution over the bed surface and permit liquid to pass through quickly and evenly onto the bed without creating extra back pressure

Hygiene

- Hygienic fittings
- In routine use, INdEX™ columns require little maintenance and are easy to keep clean

Materials

- Compatible with liquids commonly used in process-scale chromatography, including sanitization and cleaning agents such as NaOH and ethanol, see Table 2

Table 2. Column component materials and compatibility

Component	Material	In contact with process liquid
Lid	polypropylene (PP)	
Upper flange	PP	
Column tube	borosilicate glass	✓
Bottom flange	PP	✓
End-piece	PP	✓
Rod	stainless steel 316	
Adaptor	stainless steel 316L	✓
TC connector, bottom	stainless steel 316L	✓
TC connector	stainless steel 316	✓
Support net	PP	✓
Nets	PP (polyamide, PA, available)	✓ ✓
Sealing ring	nitrile	
Valve	stainless steel	
O-rings	EPDM	✓
Washers	stainless steel 316	
Nut	stainless steel 316	
Wing nut	stainless steel 316	
Grip nut	polystyrol	
Hose connector	PA	

Accessories for INdEX™ columns



Accessories available for INdEX™ columns.



Lower part of INdEX™ 200 column with accessories mounted.



INdEX™ 200 column with packing device.

Ordering information

Column	Product code	Column	Product code
INdEX™ 70/500	18111506	INdEX™ 100/500	18110415
INdEX™ 70/950	18111507	INdEX™ 100/950	18110416
INdEX™ 70 stand*	18110360	INdEX™ 100 stand*	18110360
INdEX™ 140/500	18111508	INdEX™ 200/500	18110417
INdEX™ 140/950	18111509	INdEX™ 200/950	18110418
INdEX™ 140 stand*	18110361	INdEX™ 200 stand*	18110361

* Stand must be ordered separately. INdEX™ 70 and 100 stand delivered with feet. INdEX™ 140 and 200 stand delivered with wheels.

Spare parts

Designation	INdEX™ 70 Product code	INdEX™ 100 Product code	INdEX™ 140 Product code	INdEX™ 200 Product code	Qty/pack
Support net, adaptor	18111424	18025156	18111299	18025256	2
Net 23 µm, adaptor, PP	18111426	18925101	18111301	18925301	2
Net 10 µm, adaptor, PA	18111428	18025176	18111303	18025276	2
Support net, end-piece	18111425	18025155	18111298	18025255	2
Net 23 µm, end-piece, PP	18111427	18925201	18111300	18925401	2
Net 10 µm, end-piece, PA	18111429	18025177	18111302	18025277	2

Accessories

Designation	INdEX™ 70 Product code	INdEX™ 100 Product code	INdEX™ 140 Product code	INdEX™ 200 Product code	Qty/pack
Air Trap	18111424	18025156	18111299	18025256	1
Complete	18110296	18110296	18110297	18110297	1
Valves	18111428	18025176	18111303	18025276	1
4-port, 2-way	18575701	18575701	18575701	18575701	1
4-port, 4-way	18575801	18575801	18575801	18575801	1
T-junction	18110429	18110429	18110429	18110429	1
Safety valve	18573801	18573801	18573801	18573801	1
Pressure relief valve	18110536	18110536	18110536	18110536	1
Manometer kit	18103107	18103107	18103107	18103107	1
Wheels	29600126	29600126	29601455	29601455	1
Tubing with sanitary fittings <i>i.d. 6 mm, TC 25 mm</i>					
30 cm	18000542	18000542	18000542	18000542	1
75 cm	18000543	18000543	18000543	18000543	1
125 cm	18000544	18000544	18000544	18000544	1
150 cm	18000545	18000545	18000545	18000545	1
200 cm	18000547	18000547	18000547	18000547	1
Connectors <i>i.d. 6 mm:</i>					
25 mm TC-1/4" threaded	18025198	18025198	18025198	18025198	2
25 mm TC-1/2" threaded	18101267	18101267	18101267	18101267	2
25 mm TC-M6 threaded	18103109	18103109	—	—	2
25 mm TC – i.d. 22 mm, 51 mm TC	18101269	18101269	18101269	18101269	2
Clamp 25 mm	18100131	18100131	18100131	18100131	2
Gasket 25 mm	18001927	18001927	18001927	18001927	2
Packing device with PP lid*	18111435	18110422	18111436	18110423	1
Lid kit** for packing device	—	18110863	18111437	18110864	1

* The packing device consists of PP lid, a 380 mm glass tube, flanged, rods, O-rings in EPDM, support net, adaptor net, screws, and nuts.

** The lid kit consists of PP lid, O-rings in EPDM, support net, adaptor net, screws, and nuts. The lid kit can be used together with the packing device for BPG™ columns on INdEX™ columns.

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CY14623-31Jan22-DF

