

INdEX™ 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. Microbial growth on agar plates.

- 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	acetal plastic	
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	Code no.	Column	Code no.
INdEX 70/500	18-1115-06	INdEX 100/500	18-1104-15
INdEX 70/950	18-1115-07	INdEX 100/950	18-1104-16
INdEX 70 stand*	18-1103-60	INdEX 100 stand*	18-1103-60
INdEX 140/500	18-1115-08	INdEX 200/500	18-1104-17
INdEX 140/950	18-1115-09	INdEX 200/950	18-1104-18
INdEX 140 stand*	18-1103-61	INdEX 200 stand*	18-1103-61

* Stand must be ordered separately.

Spare parts

Designation	INdEX 70 Code no.	INdEX 100 Code no.	INdEX 140 Code no.	INdEX 200 Code no.	Qty/pack
Support net, adaptor	18-1114-24	18-0251-56	18-1112-99	18-0252-56	2
Net 23 µm, adaptor, PP	18-1114-26	18-9251-01	18-1113-01	18-9253-01	2
Net 10 µm, adaptor, PA	18-1114-28	18-0251-76	18-1113-03	18-0252-76	2
Support net, end-piece	18-1114-25	18-0251-55	18-1112-98	18-0252-55	2
Net 23 µm, end-piece, PP	18-1114-27	18-9252-01	18-1113-00	18-9254-01	2
Net 10 µm, end-piece, PA	18-1114-29	18-0251-77	18-1113-02	18-0252-77	2

Accessories

Designation	INdEX 70 Code no.	INdEX 100 Code no.	INdEX 140 Code no.	INdEX 200 Code no.	Qty/pack
Air Trap	18-1114-24	18-0251-56	18-1112-99	18-0252-56	1
Complete	18-1102-96	18-1102-96	18-1102-97	18-1102-97	1
Valves	18-1114-28	18-0251-76	18-1113-03	18-0252-76	1
4-port, 2-way	18-5757-01	18-5757-01	18-5757-01	18-5757-01	1
4-port, 4-way	18-5758-01	18-5758-01	18-5758-01	18-5758-01	1
T-junction	18-1104-29	18-1104-29	18-1104-29	18-1104-29	1
Safety valve	18-5738-01	18-5738-01	18-5738-01	18-5738-01	1
Pressure relief valve	18-1105-36	18-1105-36	18-1105-36	18-1105-36	1
Manometer kit	18-1031-07	18-1031-07	18-1031-07	18-1031-07	1
Wheels	18-1001-09	18-1001-09	18-1001-09	18-1001-09	1
Tubing with sanitary fittings <i>i.d. 6 mm, TC 25 mm</i>					
30 cm	18-0005-42	18-0005-42	18-0005-42	18-0005-42	1
75 cm	18-0005-43	18-0005-43	18-0005-43	18-0005-43	1
125 cm	18-0005-44	18-0005-44	18-0005-44	18-0005-44	1
150 cm	18-0005-45	18-0005-45	18-0005-45	18-0005-45	1
200 cm	18-0005-47	18-0005-47	18-0005-47	18-0005-47	1
Connectors <i>i.d. 6 mm:</i>					
25 mm TC-1/4" threaded	18-0251-98	18-0251-98	18-0251-98	18-0251-98	2
25 mm TC-1/2" threaded	18-1012-67	18-1012-67	18-1012-67	18-1012-67	2
25 mm TC-M6 threaded	18-1031-09	18-1031-09	-	-	2
25 mm TC – i.d. 22 mm, 51 mm TC	18-1012-69	18-1012-69	18-1012-69	18-1012-69	2
Clamp 25 mm	18-1001-31	18-1001-31	18-1001-31	18-1001-31	2
Gasket 25 mm	18-0019-27	18-0019-27	18-0019-27	18-0019-27	2
Packing device with PP lid*	18-1114-35	18-1104-22	18-1114-36	18-1104-23	1
Lid kit** for packing device	-	18-1108-63	18-1114-37	18-1108-64	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.

For local office contact information, visit
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