

Easy Columns

Summary

The Easy Column has five different size from inner diameter 100mm to 450mm, therefore it can provide a column for application from small-scale experiments to manufacturing of bio-pharmaceuticals. Easy Column adopts a simple structure. However, the sealing O-ring of the adapter with a new lever structure is simple and surely. Height adjustment of the adapter can be easily by single screw.

Overview

Inner diameter in the range of the Easy Column is 100mm to 450mm (Please see table 1) with the column tube made by borosilicate glass and cast acrylic. The maximum operating pressure is 0.3 to 0.5MPa (3 to 5bar).

Wetted material is electrolytic polished stainless steel 316L and FDA CFR21 Part177 certificated plastic PP, EPDM, PEEK and Acrylic. Bed supports are made by mesh of stainless steel 316L.(Please see table 2)



Fig.1 Easy Column I.D.10cm and 30cm.

Table 1 Range of Easy Columns

tube size	Tube	Mini. bed height	Max. bed height	Max. pres- sure	inlet/ outlet	dimensions
I.D. x height mm	material	and volume mm & [L]	and volume mm & [L]	bar	I.D. mm	W x D x H (min-max), weight mm, Kg
100x500	Glass	100 [0.8]	350 [2.7]	5	4	50x50x(125-177),33
100x1,000	Glass	550 [4.3]	750 [5.9]	5	4	50x50x(175-227),38
140x500	Glass	100 [1.7]	350 [5.8]	5	4	53x53x(125-177),38
140x1,000	Glass	550 [9.2]	750 [12.5]	5	4	53x53x(175-227),45
200x500	Glass	100 [3.1]	350 [10.7]	5	4	57x57x(125-177),58
200x1,000	Glass	550 [16.8]	750 [22.9]	5	4	57x57x(175-227),68
300x500	Glass	100 [7.3]	350 [25.6]	3	6	67x67x(125-177),88
300x1,000	Glass	550 [40.2]	750 [54.8]	3	6	67x67x(175-227),107
450x550	Acrylic	100 [15.6]	350 [54.7]	5	10	75x75x(135-177),185
450x1x000	Acrylic	550 [85.9]	750 [117.2]	5	10	75x75x(175-193),211

Chemical resistance

Easy Column series are stable to buffer's that are used in the process of biopharmaceuticals and biochemistry. However, contact between the stainless steel and the NaCl-containing solution should be careful. It can be used in normal operation, but not used of NaCl solution to store long-term. Chemical resistance data shown in Table 3, summarizes from the several published information.

Materials shown in Table 2 are compatible with chemicals used in common biological processes. However, contact between the stainless steel and the NaCl-containing solution should be careful. It can be used in normal operation, but not used of NaCl solution to store long-term.

*1 : Avoid contact of more than 4 hours.

*2 : Can be used in normal operation, but not used of NaCl solution to store long-term.

*Note, stainless steel will corrode by NaCl at lower

Table 2 Wetted parts materials

parts	Material
column tube	borosilicate glass or Acrylic
distributor	PP
support net	Stainless steel 316L
flange	Stainless steel 316L
seals	EPDM

EPDM : Ethylene Propylene Rubber. PP : Polypropylene

PEEK : Polyether ether ketone

Table 3 Chemical resistance of Auto Columns

chemicals	concentration	compatibility
Hydrochloric acid	0.1M	*1
NaCl	2M	*2
NaOH	2M	ok
Acetic acid	10%	ok
Ethanol	10%	*3
Acetone	10%	*3 *4

than pH4 acidic environment.

*3 : Not recommended because the surface of tube is clouded by contact.

*4 : Can be used at 1% to 2% of acetone at which to measure the HETP.

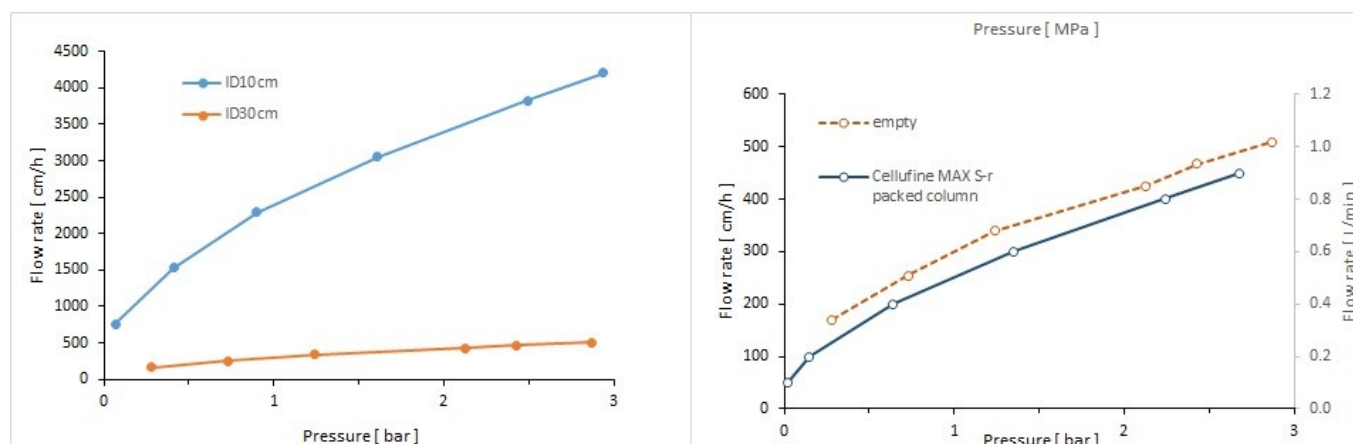


Fig.2 A: Flow—Pressure rate curves of empty Easy Columns. B: Flow - Pressure rate curves of empty ID30cm Easy Column and Cellufine MAX S-r ion exchanger resin packed column.

Ordering information

Easy Column series

Tube size I.D. x height mm	Coad No.	Tube size I.D. x height mm	Coad No.
100x500	EC0100GI0500	300x500	EC0300GI0500
100x1,000	EC0100GI1000	300x1,000	EC0300GI1000
140x500	EC0140GI0500	450x550	EC0450AI0550
140x1,000	EC0140GI1000	450x1,000	EC0450AI1000
200x500	EC0200GI0500		
200x1,000	EC0200GI1000		

Tube material, Stainless steel 316L or Acrylic are also available. If you need the other length of tube please contact JNC or local agent.

Easy Column consumable parts

Parts Name	Description	Qty/pc	Parts Code No.
U-type sealing	Out edge of top screen	1	4.01
U-type sealing	Out edge of bottom screen	1	1.01
Top screen	Pore size 10 micrometer of 316L screen	1	4.02
Bottom screen	Pore size 10 micrometer of 316L screen	1	1.02
O-ring	Adapter	1	4.04
O-ring	Bottom of flange	1	2.05
O-ring	Junction of adapter and piping	1	1.06
O-ring	Junction of end piece and piping	1	4.23
Sealing Kit /Slurry valve	Sealing of the slurry valve	1set	300

* Please order in column code and parts code.

Accessory

Name	Qty / pc	Code No.
Tube with sanitary fitting (2m, I.D. 6.4mm)	1	T6SF
Tube with sanitary fitting (2m, I.D. 9.5mm)	1	T10SF
Clamp 25mm	10	CLA25-10
Gasket 25mm	50	GAS25-50
4 port / 4 way valve 6mm	1	4P4W-V6

For more information please contact your local agent.

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