

## PROCESS-SCALE CHROMATOGRAPHY

# Bio-Rad® EasyPack™ Columns

- Open column design
- Adjustable height adaptor with central screw mechanism
- Unique filter and flow distributor
- High packing efficiency
- Documentation for regulatory submissions
- Customizable diameter up to 2 m

## Optimized Performance

Bio-Rad EasyPack process-scale chromatography columns are designed for industrial applications. These open columns have variable bed-height adaptors, inflatable seals, and fixed bottom endpieces. Their sanitary design ensures hygienic performance and thorough cleaning. All Bio-Rad EasyPack columns come with a complete set of regulatory support documentation.

From pilot to manufacturing scale, Bio-Rad EasyPack columns are directly scalable. To minimize scale-up and development time, these columns have the same basic design for all column configurations. Standard column dimensions include tube lengths of 600 and 900 mm and diameters are recommended from 100 to 1,000 mm. Columns are available with borosilicate glass, 316L stainless steel, or acrylic column tubes. Columns may be customized to any length up to 1,200 mm or any diameter up to 2 m.

### Variable Height Adaptor With Central Screw Adjustment Mechanism

Bio-Rad EasyPack columns have a centralized variable height adaptor for all column diameters up to 1,000 mm, from pilot to manufacturing scale. With its adjustable central screw mechanism, the adaptor allows either axial compression, flow packing, or a combination of both. Additionally, the adjustable adaptor provides the flexibility to accommodate any chromatography support at any bed height with a single column.

The adaptor design simplifies packing and unpacking. The central screw design allows a single operator to pack and unpack the column.

### Unique Flow Distribution System

The adaptor and bottom endpiece of Bio-Rad EasyPack columns have a unique flow distribution system that enhances packing and operating performance and ensures uniform distribution at all flow rates.

The standard filter is stainless steel with a 20 µm nominal porosity for uniform flow and minimal product retention. A distributor plate directs the flow across the filter quickly and evenly. This distributor plate and filter combination ensures optimal, uniform flow distribution across the bed and through the column.

### Inflatable Seal Design

The design of the Bio-Rad EasyPack adaptor seal provides added security against leakage and poor packing by ensuring uniform pressure throughout the seal. The adaptor seals on all columns are inflated with compressed gas (air or nitrogen) as standard. If preferred, a liquid pump can be installed so that inert fluids can be used for inflation instead of gas.



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### Regulatory Support and Quality Assurance

The Bio-Rad manufacturing procedures ensure that each step and every component are fully documented. The qualification documentation package allows production in compliance with U.S. and European regulations.

The original documentation and one electronic copy are included with each column. Bio-Rad maintains controlled copies. Bio-Rad EasyPack chromatography columns are manufactured in compliance with engineering standards for pressure vessels, and each column comes with CE certification. The Bio-Rad manufacturing facility is certified according to ISO 9001:2008 standards.

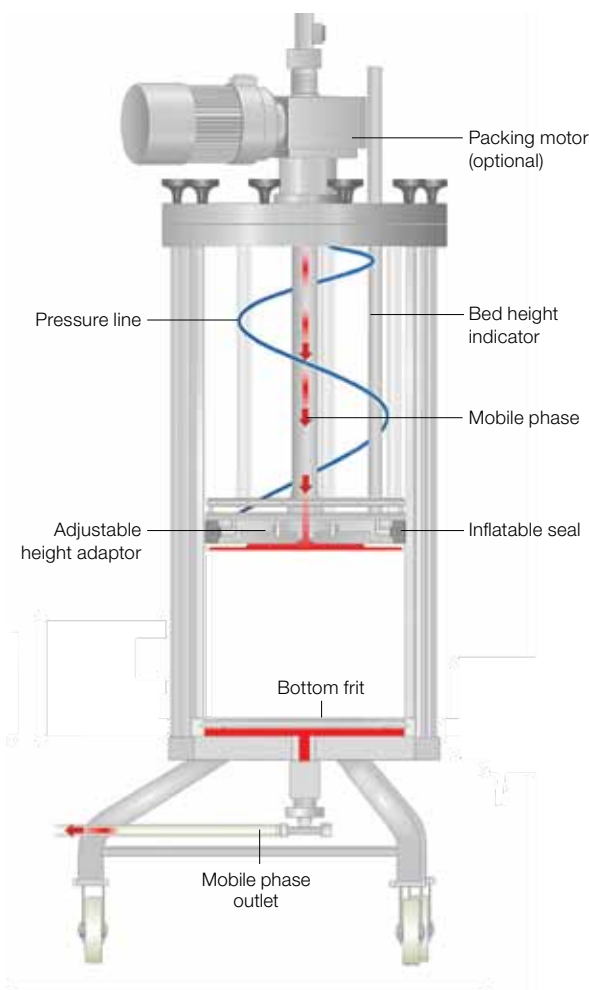
### Bio-Rad® Packing Motor

Bio-Rad offers an optional packing motor for all column diameters. The motor ensures quick and precise control when raising and lowering the adaptor. The packing motor makes it possible for one person to pack large-diameter columns. A motor is strongly recommended for column diameters greater than 180 mm.

### Customized Columns

In addition to offering a standard line of columns, Bio-Rad specializes in working with customers to design and manufacture custom columns. Customization may include modification to column dimensions, pressure rating, valves, ports, material, jacketing, etc.

Bio-Rad EasyPack columns are easily upgradable to Bio-Rad® InPlace™ process chromatography columns, which allow packing, unpacking, and cleaning in place.



Please contact your local Bio-Rad sales representative for ordering information.

### Specifications\*

	Bio-Rad EasyPack Column Nominal Internal Diameter, mm																
	100	140	180	200	250	300	350	400	450	500	600	700	800	1,000	1,200	1,300	1,400
Actual internal diameter, mm	100 ± 2	140 ± 2	180 ± 2	200 ± 2	250 ± 2	296 ± 2	350 ± 2	400 ± 2	446 ± 2	500 ± 2	596.5 ± 2	700 ± 2	800 ± 2	1,000 ± 3	1,200 ± 3	1,300 ± 3	1,400 ± 3
Maximum pressure at 30°C, bar																	
Calibrated borosilicate glass	6.0	—	—	4.7	—	3.6	—	—	2.4	—	—	—	—	—	—	—	—
Stainless steel 316L**	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0
Acrylic**	6.0	6.0	6.0	6.0	6.0	6.0	5.5	5.0	4.5	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

\* Standard tube heights available: 600 and 900 mm.

\*\* Higher pressure rating can be quoted on request.



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