

# EasyPack™ Column

## Optimized Performance with Axial compression

VERDOT Ips<sup>2</sup> 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 EasyPack columns come with a complete set of regulatory support documentation.

From pilot to manufacturing scale, 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 200 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 greater than 2 m.

### Variable Height Adaptor With Central Screw Adjustment Mechanism

EasyPack columns have a variable height adaptor for all column diameters, 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 unique flow distribution system of the VERDOT Ips<sup>2</sup> EasyPack Column ensures complete and even mobile phase distribution, at all flow rates.

Standard bed supports are fritted SS 316L mesh with a 25µm absolute porosity. Higher grade stainless steel and additional porosities (5µm to 90µm) are available upon request.

### Inflatable Seal Design

All columns are equipped with an inflatable seal and hydropneumatic pump. The inflatable seal is filled with liquid (NaOH or EtOH) and can be quickly inflated/deflated by using compressed air. Once inflated, the seal can be locked and isolated to permit unlimited storage of a packed column.

The hydropneumatic design eliminates leakage resulting from thermal variation or jammed scraper seal/O-ring.

- Open column design
- Variable height adaptor for axial compression
- Unique frit and flow distributor
- High packing efficiency
- Reliable, sanitary and fast hydropneumatic inflatable sealing system
- Hoist-free operation with optional Power Lifter
- Complete documentation for regulatory submissions
- Customizable diameters from 20cm to > 2m



## Regulatory support

The VERDOT Ips<sup>2</sup> 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. VERDOT Ips<sup>2</sup> maintains controlled copies.

EasyPack chromatography columns are manufactured in compliance with engineering standards for pressure vessels, and each column comes with CE certification. The manufacturing facility is certified according to ISO 9001:2008 standards.

A USDA approved version of the EasyPack chromatography column is available, upon request.

## Packing motor

VERDOT Ips<sup>2</sup> offers an optional packing motor for all column diameters. A motor is strongly recommended for column diameters  $\geq 296$ mm. The electrical motor permits speed control movement of the top adaptor during packing and unpacking operations. At speeds of up to 300cm/h at 3 bar, packing of quick settling media (silica, hydroxyapatite,...) or high compressible media (agarose, epoxide, methacrylate,...), is simple, reproducible and efficient.

## Customized Columns

In addition to offering a standard line of columns, VERDOT Ips<sup>2</sup> 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.

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



The VERDOT Ips<sup>2</sup> Column Lifter

## Accessories

The VERDOT Ips<sup>2</sup> Column Lifter permits safe, simple and fast opening or disassembly of the EasyPack process scale chromatography columns.

The VERDOT Ips<sup>2</sup> Basic Control Console allows controlling the movement of the piston. Linear speed (in cm/h) and torque limitation can be programmed on the digital touchscreen user interface. It can monitor up to 3 different diameters of the columns in a predefined range (i.e.diameter range from 400 to 800 mm).

## Specifications\*

	EasyPack Column Nominal Internal Diameter, mm										
	200	250	300	350	400	450	500	600	700	800	1000
Actual Internal diameter, mm	200±2	250±2	296±2	350±2	400±2	446±2	500±2	596±2	700±2	800±2	1000±3
Maximum pressure at 30°C, bar											
Glass tube	4.7	3.8	3.6	—	—	2.4	—	—	—	—	—
316L SS tube**	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	3.0	3.0	3.0
Acrylic tube**	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	3.0	3.0	3.0

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

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