

# LC100.650.VE100

## Prochrom<sup>®</sup> DAC Columns by Novasep

Preparative chromatography columns - optimum performance guaranteed

When placing an order, please include the Novasep code directly on your PO:

Description	Code
LC100.650.VE100	NVS21959
Spare parts	NVS22266

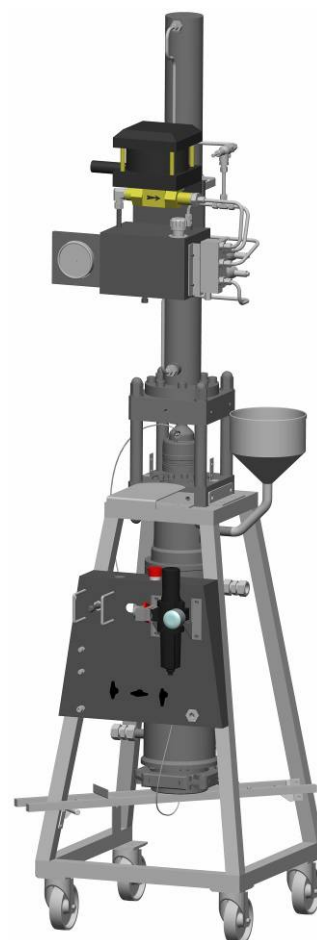
Note: 650: Column Length  
VE: Hydraulically Actuated Piston

### 1 Product description

The **LC100.650.VE100** preparative High Performance Liquid Chromatography (HPLC) column is designed for cGMP operation. Any type of packing material can be used to fill the column provided the proper packing pressure is chosen to avoid destruction of the particles. It can be operated with the most common solvents used in chromatography. The column module is composed of the column itself and its compression system mounted on a stainless steel frame.

MAIN CHARACTERISTICS	
Internal Diameter (mm)	100
Maximum Bed Length (mm)	350
Operating pressure (bar)	100
Operating Temperature (°C)	5 to 60
Compression feature	Dynamic Axial Compression
Slurry inlets	1
Weight (kg)	220
DxWxH (mm)	693 x 704 x 2446

Although Prochrom<sup>®</sup> DAC column can be connected to any pumping system, performance is maximized when used in conjunction with our Prochrom<sup>®</sup> Hipersep chromatography systems.



Pure Performance for the Life Sciences



Product Data Profile

## 2 Product Specifications

LC100.650.VE100	
ITEM	DESCRIPTION
<b>Column</b>	<p><b>Column Tube</b></p> <p>The internal diameter of the column tube is 100 mm. The standard surface roughness of the column tube ID is 0.4 µm (15.7 µ inches). The external finish is approximately 1.6 µm (63 µ inches).</p>
	<p><b>Piston and Flange</b></p> <p>The piston and flange of the column contain a woven mesh frit (2µm nominal porosity) and a flow distributor to provide even distribution of the liquid ("plug flow") over the cross section of the packed bed. The finish of the wetted surface roughness of the piston and flange is approximately 0.8µm (30 µ inches)</p> <p>The flange is sealed to the column tube with a FEP encapsulated "O"-ring and held in place with a quick release chain. The piston is sealed to the column tube with a PTFE seal. The other seals are PTFE, FEP encapsulated.</p> <p>The piston's frit is cooled down with liquid nitrogen (or carbon dioxide ice) in order to shrink it. Back at room temperature, the frit expands and fits tightly to its housing.</p>
	<p><b>Hydraulic Jack</b></p> <p>The hydraulic jack is mounted above the column tube. The hydraulic jack has a stroke length of 650 mm, which allows the user to pack beds of variable lengths. The hydraulic jack exterior is made of stainless steel.</p>
	<p><b>Hydraulic pump</b></p> <p>An air driven amplification pump is used to pressurize the oil. This pressurized oil is used to move the piston down or up. The oil pressure is proportional to the air supply pressure in static conditions (piston not moving).</p>
<b>Reset button</b>	Pneumatic push button to reset the hydraulic unit after the emergency button has been disengaged.
<b>Emergency Stop</b>	Pneumatic emergency stop to shut down the hydraulic pump in case of emergency.
<b>"OR" function</b>	Pneumatic function "OR" allowing emergency push button reset.
<b>Air supply Valve</b>	Pneumatic 2 way valve, used to supply the hydraulic pump with compressed air.
<b>Motion Selector</b>	Pneumatic switch to control the oil distributor in order to select the piston's motion (up, down, stop).
<b>Pressure Regulator</b>	Air pressure regulator to set the air pressure supply to the pneumatic amplification pump (N°2). The air pressure is linear with the oil pressure.
<b>Oil distributor</b>	Oil distributor controlled by the motion selector.
<b>Filter</b>	Breather filter for the oil reservoir.
<b>Oil reservoir</b>	Reservoir for the hydraulic oil with 7 L capacity.
<b>Relief valve</b>	Oil pressure relief valve to protect the column in case of an accidental over-pressure.
<b>Pressure gauge</b>	Pressure gauge indicating the oil pressure. This indication is used to determine the bed compression.
<b>Packing valves</b>	Manual 3-way ball valve to isolate the column from the pumping skid for the packing and unpacking operations.
<b>Packing valve</b>	Manual 3-way ball valve to select solvent direction toward the flange's or piston's side during packing operation in order to bleed the air and/or remove the slurry solvent.

The design of the Column is made in such a way to reduce as much dead volume as possible. All wetted parts of the column module are made of SS316L stainless steel, FEP and PTFE.

The **LC100.650.VE100** is rated to be operated in hazardous area.

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