

## LAB PREPARATIVE LIQUID CHROMATOGRAPHY COLUMNS SEPARCHROM PC 01L



High efficiency, high pressure PLC columns **PC 01L** are designed for frequent laboratory use together with any type of prep chromatograph. They are offered with internal diameter 25 mm, 50 mm, 75 mm and 100 mm in all

lengths, not exceeding more than ten times the I.D.

High performance preparative column operating in a laboratory have to meet the demands for high universality, while each customer has particular problems to solve, each customer has different equipment and his own custom of column packing. Therefore are the columns PC 01L designed to allow to be packed in both ways: in a mode of dynamic slurry and by sedimentation as well. Non change or adjustment of the hardware is needed for switching the packing mode. There is a possibility for hydraulic cylinders as well as for input or output of the mobile phase to be placed or at the top or at the bottom of the column tube.

Much like other SEPARCHROM range columns the PC 01L are equipped on the input and output with identical pistons. Pistons are provided by special Poremet® frits with a minimum hydraulic resistance and a Separlab patented liquid distributing system providing perfect and uniform flow distribution through the whole column. The frit is simple accessible as it is fixed in a circular steel ring with a thread to be connected to the own piston. The frit can be as large as column tube cross section.

Pistons and sealing are fully exchangeable so the upper one can be replaced by the bottom. Main piston has high stroke and is moved by a force generated in a one way hydraulic cylinder (returning by a spring action).

Polished column tube is equipped by screwed flanges. No welded connection is used at all. No strong tightening is necessary to seal the column flanges. Two-piece piston seal is made of a sealing PTFE ring and PP supporting ring. The sealing

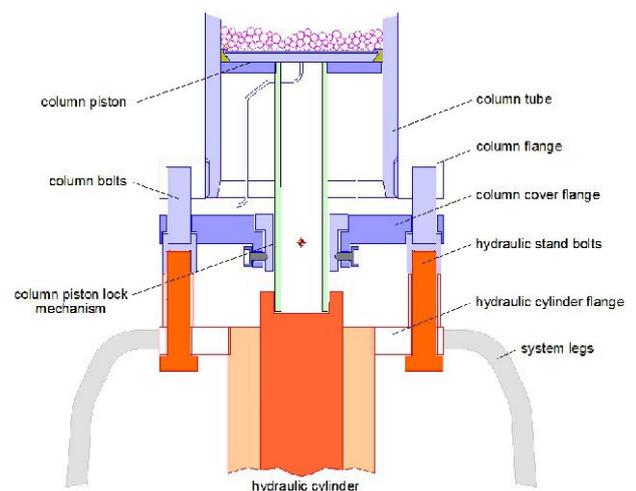
rings have a long life time and allow repetitious packing. It is impossible to cause damages the column tube surface by manipulation.

The system is self sealing, as the conically shaped piston is pressed into the sealing ring and power is transmitted to column tube walls.

The flange holding a hydraulic cylinder is connected to the column tube flange by long bolts with distance tubes.

Hydraulic cylinder piston is attached to the column piston by a hollow trunnion and can be simply released. Inside the tube is located a mobile phase tubing.

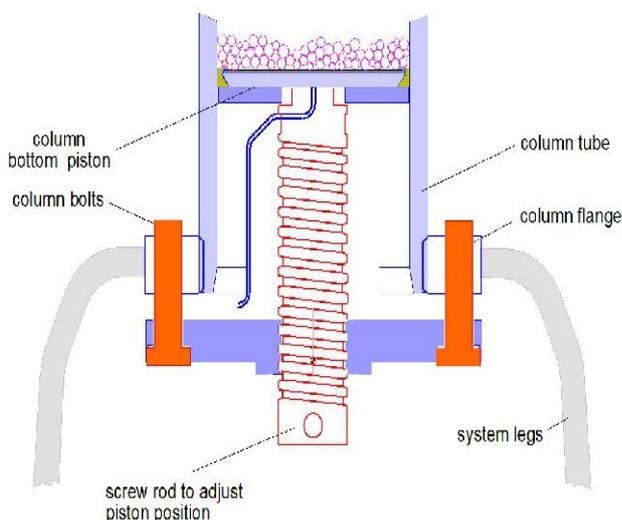
PC 01L columns are equipped with a simple stand. Stand legs are not fixed to the bottom flange, but to the column bottom flange. It means that the bottom flange and bottom piston can be removed and sorbent displaced comfortably by oil pressure. Elongating rods are delivered as an option in case piston stroke is not sufficient to displace sorbent from whole column length. Many customers run several preparative columns simultaneously on multiple devices, or they turn more columns in one device. They find unpleasant to pay for each column new oil cylinder and pump as they are actually only necessary for the packing and occasional small shift of the piston during the use.



For such customers SEPARLAB offers an upgrade of PC 01L columns with a possibility to lock piston position and to release the hydraulic part after packing. It is only necessary to add few components to modify standard column in such a way.

The packed column is to be used for long time. When necessary the main piston is moved a bit into the column tube by tightening of three flange bolts.

An other advantageous solution is a possibility to change active column length using moving output piston. This can be currently moved only in few millimeters distance by output flange bolts tightening. When adapted output flange with long screw rod is used, the piston can be moved almost through whole column. It means that sorbent bed length can be changed and even very short columns can be packed when necessary. This ordering is easily used for columns packed by means of dynamic slurry technique.



Adapters that extend the length of columns are supplied for a sedimentation packing procedure. May be made of plastic or of stainless steel (non-explosive environment) and are equipped with connecting flanges which are sealed to the columns by an expanded PTFE gaskets.

All input and output connecting fittings of PC 01L columns are standard Swagelok products. We currently deliver columns adapted for 1,6 mm (1/16") capillaries, however other diameters are available too.



## Currently delivered columns

Type of column	Inner diameter mm	Length mm	Pressure bar
SEPARCHROM PC01 L-25/50 M	25	50	200
SEPARCHROM PC01 L-25/250 M	25	250	200
SEPARCHROM PC01 L-50/50 M	50	50	200
SEPARCHROM PC01 L-50/250 M	50	250	200
SEPARCHROM PC01 L-50/500 M	50	500	200
SEPARCHROM PC01 L-100/100 M	100	100	150
SEPARCHROM PC01 L-100/250 M	100	250	150
SEPARCHROM PC01 L-100/500 M	100	500	150

Type of column	Inner diameter mm	Length mm	Pressure bar
SEPARCHROM PC01 L-25/50 H	25	50	200
SEPARCHROM PC01 L-25/250 H	25	250	200
SEPARCHROM PC01 L-50/50 H	50	50	200
SEPARCHROM PC01 L-50/250 H	50	250	200
SEPARCHROM PC01 L-50/500 H	50	500	200
SEPARCHROM PC01 L-100/100 H	100	100	150
SEPARCHROM PC01 L-100/250 H	100	250	150
SEPARCHROM PC01 L-100/500 H	100	500	150

M in column code means main piston is moved manually, H means hydraulic cylinder is used to move the piston

Manufacturer reserves the privilege to change design and parameters of the product.

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