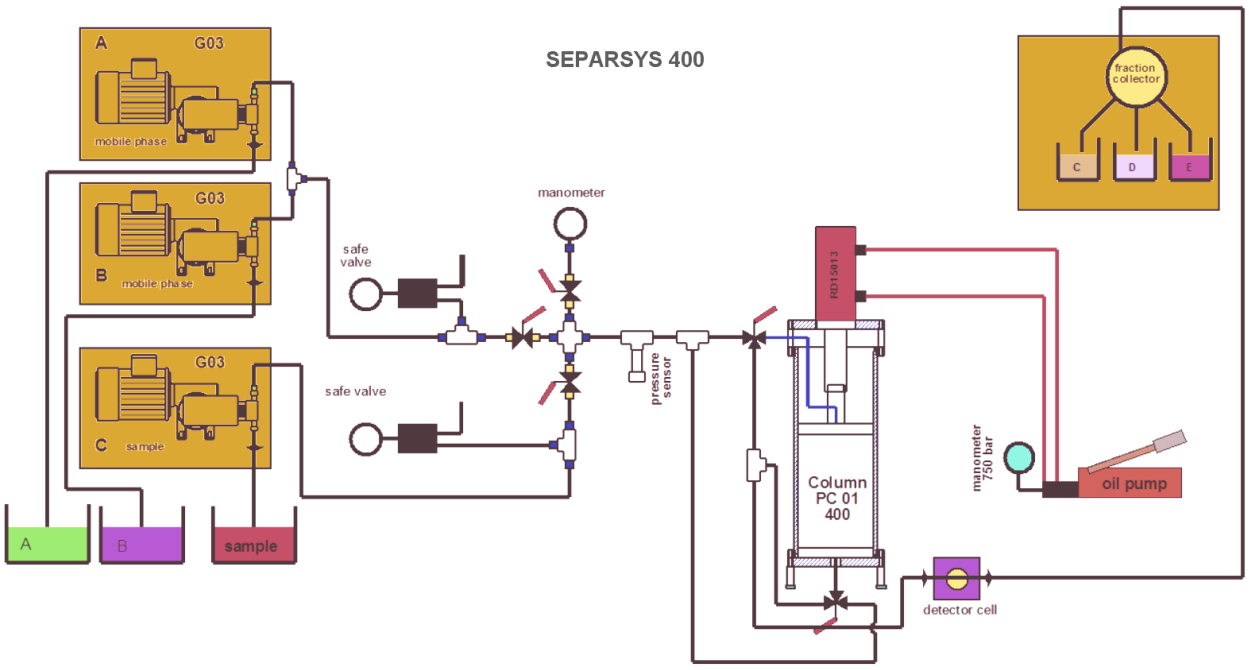
separsys HP 400, 800 FP, 300 DS

INDUSTRIAL SEPARATION UNITS - HIGH PRESSURE

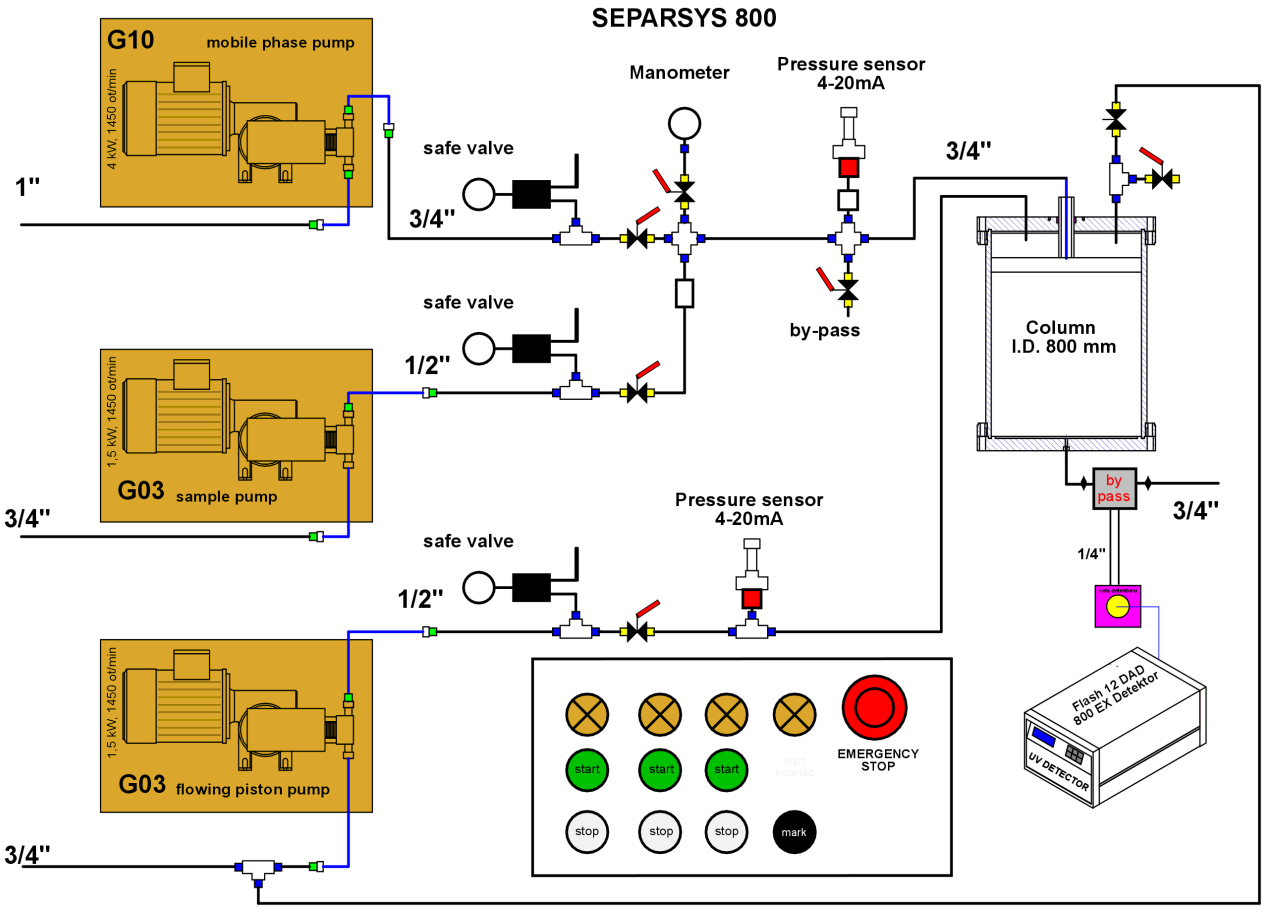
Industrial preparative chromatographs are usually tailored according user´s need. Therefore only an example of already delivered unit is introduced here. It is recommended to contact company specialists when a system specification is developed.
Separsys HP 400 is an industrial unit for liquid high efficiency, high pressure preparative chromatography. It can be used for isocratic, high pressure, high performance chromatography. It is completely controlled by modified ***ECOMAC*** software only. The unit consists of (see schematic drawing):

- high-pressure column ***Separchrom PC01*** 400 with an inside diameter 399 mm and length 1000 mm, column is packed with 15 µm spherical silica (sedimentation procedure of packing), maximum pressure 80 bar
- block of mobile phase delivery control (including bypass and flow reversing) provided with manual high-pressure ball valves and electronic pressure sensors
- to the output column fixed detector ***cell*** PLCC 15 Ex and a ***detector FLASH 06S DAD 600 EX***
- three membrane pumps ***Hydracell*** P3 (up to 8 l/min. and 70 bar each, oil level control) - two are in parallel and supply the mobile phase, the third delivers the mixture to be separated
- remote switchboard with three units of frequency converters ABB which supply power to pump motors and allow flow changes and electronic control unit separel 01
- PC computer using a modified software ***ECOMAC*** to set parameters of the separation process and to monitor both detector signal and column pressure



Separsys 800 FP is an industrial unit for liquid high efficiency, high pressure preparative chromatography. It can be used for isocratic, high pressure, high performance chromatography. It is completely controlled by modified ***ECOMAC*** software only. The unit consists of (see schematic drawing):

- new high-pressure column Separchrom PC05 800 with an inside diameter 799 mm and length 1000 mm, column is packed with 15 µ spherical silica (sedimentation procedure of packing) and equipped with a special floating piston, maximum pressure 50 bar.
- block of mobile phase delivery control (including bypass) provided with air controlled high-pressure ball valves and electronic pressure sensors.
- to the output column is connected detector cell PLCC 15 Ex through an automatic bypass system ***Separpass*** 03 (cell is in 10 m distance from the column) and a ***detector FLASH 06S DAD 600 EX***
- three membrane pumps ***Hydracell*** G3 and G10 (up to 8 l/min. and 70 bar each, oil level control, 27 l/min, 70 bar for G10) – G10 supplies the mobile phase, one G3 is injecting the sample and the second moves the column piston the third delivers the mixture to be separated.
- remote switchboard with three units of frequency converters ABB ACS 550-01-06A9-4, which supply power to pump motors and allow flow changes and electronic control unit ***separ*** 01.
- PC computer using a modified software ***ECOMAC*** to set parameters of the separation process and to monitor both detector signal and column pressure.



Separsys 300 is an industrial unit for liquid high efficiency, high pressure preparative chromatography. It can be used for isocratic, high pressure, high performance chromatography. It is completely controlled by modified ***ECOMAC*** software only. The unit consists of (see schematic drawing):

- high-pressure column ***Separchrom PC01*** 1300 with an inside diameter 299 mm and length 1300 mm, full column length piston stroke; column is packed with 10 µ spherical silica by dynamic slurry method, maximum pressure 100 bar.
- hydraulic system ***Separpress*** D100 EE 1300 having a power 100 tons and stroke 1300 mm, fed by an electric motor driven oil pump with pressure control, maxim oil pressure 200 bar.
- block of mobile phase delivery control (including bypass) provided with manual controlled high-pressure ball valves and electronic pressure sensors.
- block of flow reversion which allow to change flow direction in the column.
- to the output column is connected detector ***cell*** PLCC 15 Ex through an automatic bypass system ***Separpass*** 03 (cell is in 10 m distance from the column) and a ***detector FLASH 06S DAD 600 EX.***
- two membrane pumps ***Hydracell*** G04 (up to 8 l/min. and 120 bar each, oil level control) supply the mobile phase and the sample.
- remote switchboard with three units of frequency converters ABB, which supply power to pump motors and allow flow changes of mobile phase, sample and oil and electronic control unit separel 04.
- PC computer using a modified software ***ECOMAC*** to set parameters of the separation process and to monitor both detector signal and column pressure.

All industrial systems are delivered with ATEX certificate for hazardous environment if requested.

All industrial systems are delivered with pressure certificate for columns and whole system if requested.