

PRODUCT CATALOG

EQUIPMENT FOR ANALYTICAL, PREPARATIVE AND FLASH LIQUID CHROMATOGRAPHY

COMPACT SYSTEM Preparative & Flash Chromatography

up to **30 MPa/4 400 psi**



Touch Screen
with new SW



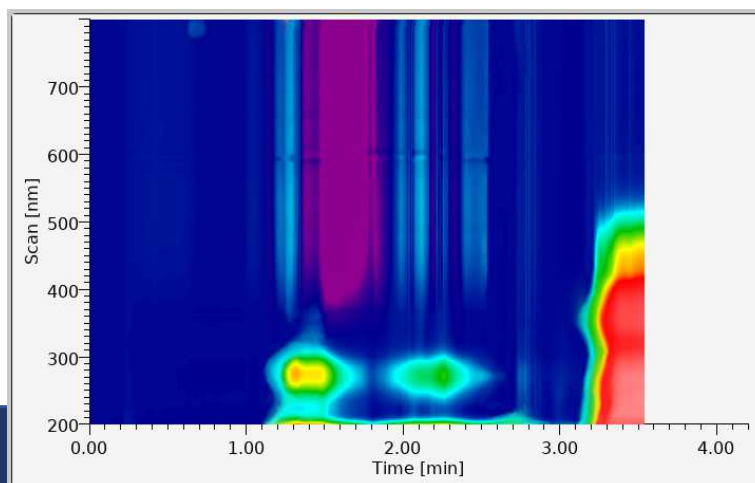
Fraction Collector
2 racks up to 96 vials



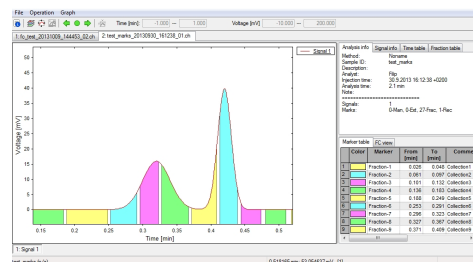
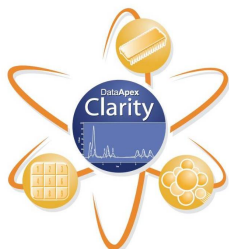
190 - 800 nm
3D spectra visualization



50 or 300 ml/min
six solvents



High effective modular LC preparative system containing UV-VIS photodiode array detector, preparative pump and gradient box. The system is variable and allows different configurations of components. All our units have implemented support for **ECOMAC** and **Clarity** software.



Preparative Pump

with flow rate up to 50, 250, 300 or **1000 ml/min**



Gradient Box

with gradient valve, optionally with built-in PC

UV-VIS Detector

with wavelength range 190-800 nm, large scale of compatible cells (see page 7)



Fraction Collectors

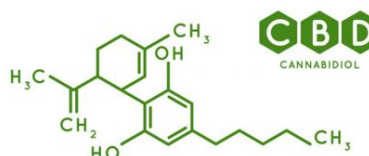
for 9, 21 and 40 ml tubes



with 10 position valve, large volume fraction collection

Special Chromatography Systems (CC, CCC, FCPC, CPC)

PREPBOX is a compact alternative to modular preparative systems. It is assembled according to the customer's wishes. It is used for high-capacity systems or with centrifugal chromatography systems like in pharmaceutical purification of cannabis extracts (CBD, CBN, CBG, CBC...).



BUILT-IN DETECTORS (ALL POWERED BY 24-36 VDC)

Very small and powerful **TOYDAD detectors** are available in many mechanical and optical versions with 2 or 4 wavelengths or as continuously scanning in wavelength ranges 200 – 400, 600 or 800 nm. Noise level at 254 nm is $\pm 50 \times 10^{-6}$ AU.

OEM Detector TOY I

Unit with small cell housing



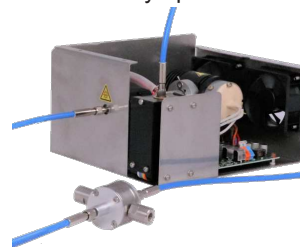
OEM Detector TOY L

Unit with cell and lamp accessible from front panel



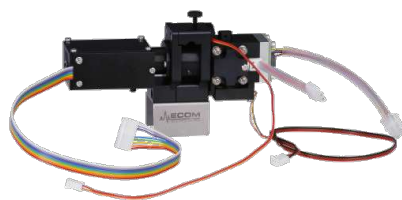
OEM Detector TOY EX

Designed for external cell connected by optical cables



OEM Detector BABY

Smallest unit with dimensions
182x59x67 mm
(7.17x2.32x2.64 in)



OEM Detector TOY U

130 mm narrow detector
with front accessible cell
220x120x110 mm
(8.67x4.72x4.33 in)



OEM Detector LED

Single or dual fix wavelengths
with LED diodes from 265 nm
and low noise $\pm 5 \times 10^{-6}$ AU
125x65x62 mm
(4.92x2.56x2.44 in)



STANDALONE DETECTORS

TOY20DAD V, **TOY20DAD VEX** and **TOY20DAD H** are designed for preparative and flash applications with 2 or 4 wavelengths or as continuously scanning in the wavelength range 190 - 800 nm for each instrument. Noise level at 254 nm is $\pm 50 \times 10^{-6}$ AU. Communication via LAN, USB, RS232 and IO ports.

UV-VIS Detector



TOYDAD V uses **internal cell** and it is equipped with keyboard, display and analog outputs.

UV-VIS Detector EX



TOYDAD VEX uses **external cell connected by optical cables** and it is equipped with keyboard, display and analog outputs.

UV-VIS Detector



TOYDAD H is used in **ECOM standard preparative systems** equipped with LAN, USB, RS232 and IO ports.



PUMPS

Preparative Pump 1000 ml/min



New OEM pump with flow rate 1000 ml/min and pressure 15 MPa (2176 psi) with new gradient box up to 4 solvents for low pressure gradient mixing.

Preparative Pump 1000 ml/min



New standalone pump with flow rate 1000 ml/min and pressure 15 MPa (2176 psi) with new gradient box up to 4 solvents for low pressure gradient mixing.

Fraction Collectors

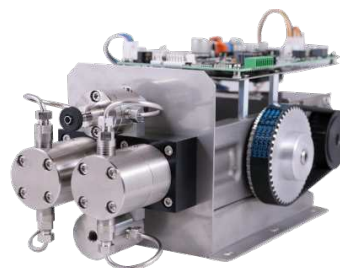


Fraction Collector EFC2096 collects fractions according to chosen method which can be created manually by keyboard just as using ECOMAC software. Analog input allows collecting based on detector signal. Racks for 9, 21 and 40 ml tubes.



Fraction Collector ECV2010 is equipped with 10 position rotary valve. It collects fractions according chosen method which can be created using ECOMAC software.

Preparative Pump 200, 250, 300 ml/min



OEM preparative pumps with pulsation compensation controlled by RS232 and LAN. Pumps work as an Isocratic Pump together with Gradient Box also as Gradient Pump.

Preparative Pump 50, 250, 300 ml/min

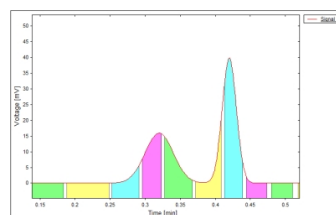


Preparative pumps with pulsation compensation, controlled by RS232 and LAN. Pumps work as an Isocratic Pump, together with Gradient Box also as Gradient Pump.

Gradient Box



Suited for liquid handling in ECOM gradient preparative system. It accommodates container for solvent bottles and four way gradient valve. ECB2000PC box contains built-in computer.



ECOMAC SW Controls all ECOM units and collects data. It is suited for preparative applications with many possibilities of fraction collecting and events programming.



Modular Analytical HPLC system includes **PDA Detector** or **UV-VIS Detector**, **Autosampler** for 96 vials, **Isocratic Pump** with flow rate up to 10 ml/min which works together with **Gradient Box** with degasser as **Gradient Pump** and **Column Oven** with heating/cooling. Communication via USB, RS232 or LAN. **Gradient Box** can be equipped with **built-in PC** to save space on a laboratory desk.

Gradient Box

with degasser, optionally with built-in PC

Column Oven

with heating and cooling 0-80° C or with heating only, up to 99° C



HPLC Pump

with flow rate up to 10 ml/min and pressure up to 60 MPa

PDA/UV-VIS Detector

with continuously variable wavelength

Sample Injection Valve

with stainless steel sample loop

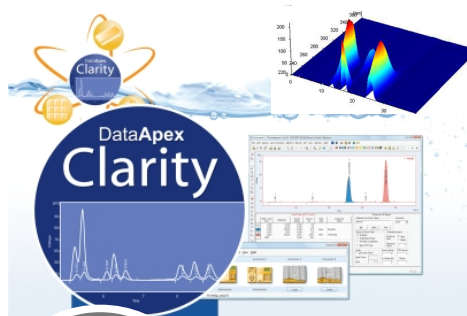


Autosampler

with excellent accuracy and linearity

CLARITY Chromatography Station

Clarity is an advanced Chromatography Data Station with optional software modules for **data acquisition**, **data processing** and **instrument control**. **All ECOM units drivers are included in the software**. Drivers contain full control of instruments as well as diagnostic tools which are made by ECOM with DataApex' supervision that guarantees the highest quality and full integration into the Clarity station.



DETECTORS

UV-VIS PDA Detector



Photodiode Array Detector ECD2800 measures at eight wavelengths simultaneously or full scan with speed up to 100 Hz. Noise level $\pm 5 \times 10^{-6}$ AU. Range of wl. 200-800 nm.

UV-VIS Detector



UV-VIS detector ECD2600/2800 with continuously variable wavelength in range of 190-800 (600) nm and noise level $\pm 3 \times 10^{-6}$ AU. Automatic wavelength calibration using deuterium spectral lines.

UV-VIS EX Detector



Modification of basic ECD2600/2800 unit suited for external cell connecting using optical cables with SMA 905 connectors. Noise level at 254 nm is $\pm 15 \times 10^{-6}$ AU. Wide range of external cells available.

UV-VIS CE Detector



Modification of basic ECD2600/2800 unit suited for capillary electrophoresis. Easily replaceable capillary in cell compartment. Noise level at 254 nm is 10×10^{-6} AU.

Autosampler



Autosampler for 96 vials with an excellent sample injection accuracy and linearity. Wide range of sample volumes, even μ l pick-up mode with zero sample loss.

Analytical Cells



Standardly included cells with 5 mm optical path length, different paths on request. Cells are designed with a temperature exchanger which suppresses the temperature changes.

PUMPS

Analytical HPLC Pump



ECP2010(H), with maximum flow rate up to 10 ml/min and pressure 40(60) MPa, works as isocratic pump, with Gradient Box also as gradient pump. It has many testing and diagnostic features.

Single Piston Pump



ECP2011 single piston pump suited for column washing and columns regeneration process. ECP2011P includes pressure sensor.



Gradient Box

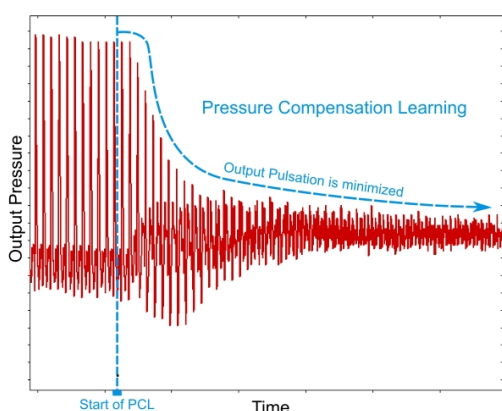


Box is suited for handling liquids in ECOM gradient systems. It accommodates container for solvent bottles, built-in high efficiency online vacuum degasser and four way gradient valve which is controlled via ECP2010 pump. ECB2004BP has a built-in PC.

Column Oven



Peltier heating/cooling column oven (0-80 °C) or heating only column oven (up to 99 °C) with a big compartment room can accommodate up to 3 columns with length up to 25 cm. The unit is controlled via keypad, RS232 or LAN Interface.



SMART TECHNOLOGY IN ECOM PUMPS

Most of ECOM pumps are equipped with the Pressure Compensation Learning algorithm. Thanks to this smart adaptive process, the pump regulates the rotation speed of the camshaft and measures its impact on pressure pulsation to minimize the output pulsation as much as possible. The algorithm, due to its adaptive capacity, is applicable for many combinations of pump working conditions (solvents, columns, etc.).

FLOW CELLS

According to our customer's wishes and requirements, ECOM designs and manufactures **special customized cells** or **modify any of our cells** from our current offer. All of our customized cells can also be **made in the OEM version**. FDA material compatibility available.

Analytical Cells



External Connection

used with optical cables



Preparative Cells



TRI-CLAMP

DN8 - DN100

