



TELEDYNE ISCO
Everywhere you look™



Torrent

PURIFICATION SYSTEM

CombiFlash Torrent[®]

The next generation in scale up Flash purification

Get the ease of use and reliability provided by CombiFlash and RediSep for Development Scale purification with the CombiFlash Torrent Purification System from Teledyne ISCO. The Torrent system is designed to be flexible for a variety of large-scale purification needs, with various methods of sample introduction and collection.

Performance

Our one liter-per-minute gradient system allows you to separate up to 600 grams in a single purification run.

Safety

Patented, solvent sensing technology monitors solvent supply and waste to enable true, walk-away automation. Pressure and vapor sensors ensure safe operation. Fully grounded tubing allows high flow rates. Air purging of the column after use simplifies disposal.

Versatility

Tailor a system to meet your needs with a variety of sample, and fraction handling configurations.

Ease of Use

Teledyne ISCO's powerful yet easy-to-use PeakTrak[®] software—the industry standard in Flash chromatography—lets you intuitively access every method parameter from one screen.



Sample load pump

Pump large volumes of liquid samples via an open-top cartridge or laboratory vessel.

Sample load cartridge

Load low-solubility samples with confidence. Use as a guard column with reusable columns.

Reliable pumps

Produce an accurate and reproducible binary gradient, even with shallow gradient profiles at 1 L/min.

Peak cutting options

Trigger peak collection via slope, threshold, or time windows. Detect at one, two, or all wavelengths using the internal UV or UV-vis PDA detector. Alternatively, add an external detector.

Foxy[®] R2

Daisy-chain up to four Foxy R2 fraction collectors for hundreds of fractions. Choose from a variety of collection containers.



Automated six-port injection valve

Enables true walk-away automation of column equilibration, sample loading, purification, column and cartridge air purge, and post-run valve cleaning. Its large diameter, easy-to-clean external tubing keeps suspended solids moving.

Patented level sensing

Active level sensing ensures adequate solvent for purifications and prevents waste overflows.

Error-free RFID detection

CombiFlash Torrent recognizes RediSep columns and automatically selects an optimized purification method. Rack sensors allow for mixed racks and unlimited fractions with intelligent rack management.

Fractionation valve for targeted collection

Use PeakTrak software to control this six-port fractionation valve of collect peaks within time windows.



Specifications

Sample size:	0.5 to 600 grams
RediSep Rf column sizes:	80 grams to 3 kilograms
Flow rate:	50–1000 mL/min
Maximum pressure:	100 psi (6.89 bar)
Detection:	200–400 nm (200–800 nm optional) with single, dual, or All-wavelength collection. Accepts external detector input.
Gradient:	Binary, high pressure solvent mixing with linear, step, or isocratic capability. Two solvent inlets.
Gradient accuracy:	<2% full scale from 0.2 to 1.0 liter/min.
Sample injection:	Automated injection with options of solid load cartridges, liquid load, or direct injection.
Controller:	10.4 in (26.7 cm) touchscreen
Software:	On-screen method development and control with PeakTrak software.
Fraction collection:	Up to four fraction collectors, fractionation valve, or manual collection.
Solvent management:	Patented, active level sensing for inlet and waste containers.
Module dimensions:	(W x D x H) 18.5 x 17.9 x 28.1 in (47 x 43.5 x 71.4 cm)
Module weight:	65 lbs (29.5 kg)
Operating voltage:	100 VAC 50 Hz, 117 VAC 60 Hz, 234 VAC 50 Hz
Safety and sample security:	<ul style="list-style-type: none"> • Static-dissipative tubing throughout • Vapor sensor for internal leak detection • Overpressure sensor • Active solvent and waste level sensing • Audible alarm when user intervention is required
Certification:	CE

RediSep Rf and RediSep Rf Gold

Enjoy easy, error-free setups on large purifications with the CombiFlash Torrent. Method automation through the use of RFID technology on Teledyne ISCO's RediSep Rf columns reduces setup time and errors.

RediSep Rf columns are available in silica, alumina, and functionalized materials such as C18, amine, cyano, and diol. RediSep Rf columns come in sizes up to 3 kilograms, with easy-to-use tapered fittings.

High performance RediSep Rf Gold columns utilize small, spherical media to provide improved resolution, faster flow rates, and shorter run times, without excessive backpressure.



Selection Information

CombiFlash Torrent Modules

The Torrent Development-scale Flash chromatography fully integrated module includes fitting adaptors for all compatible column and cartridge sizes, and prime tube assembly. Includes two 275 cm (9 ft) braided stainless steel inlet lines and one waste line.

CombiFlash Torrent Module with UV detection,
200–400 nm 68-5240-003

CombiFlash Torrent Module with UV-vis detection,
200–800 nm 68-5240-004

Sample Injection Options

Adjustable Solid Load Cartridge Caps (SLCC)

25 gram SLCC 60-5237-048
65 gram SLCC 60-5237-044
260 gram SLCC 60-5247-008
750 gram SLCC 60-5247-009

CombiFlash Torrent sample load pump 60-5247-007

Fraction Collection Options

CombiFlash Torrent Fraction valve 60-5247-006

High Flow Foxy R2 fraction collector 68-2130-007

Racks for High Flow Foxy R2 Fraction Collector

Foxy R2 accommodates two, from any combination:

Rack for 16 mm diameter tubes (100) 60-2137-151

Rack for 18 mm diameter tubes (72) 60-2137-152

Rack for 25 mm diameter tubes (36) 60-2137-153

Foxy R2 accommodates one of the following:

Set of two racks for (18) 480 mL glass bottles.

Each rack holds 9 bottles 60-5247-004

Collection bottles, 480 mL glass, case of 40 60-2137-062

Preparative rack with 26 ETFE (or ECTFE) funnels
and 50 feet of 3/8-inch vinyl FEP-lined tubing 60-2137-162

Waste Cap Sets

Waste Outlet cap (1) for 83B closure 60-5394-512

Waste Outlet cap for (1) 100 mm closure 60-5394-513

Detector Options

Model 340CF Evaporative Light Scattering Detector (ELSD). For use with preparative chromatography systems of 5 mL/min or greater. ELSD has self-contained flow splitter pump for minimal sample loss. Includes connections for 1/8 inch OD tubing. Optional connection kit, 60-5247-021, is necessary for Torrent or systems using 1/4 inch OD tubing. External nitrogen supply is required.

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Connection Kit for 340CF to CombiFlash Torrent or
systems using 1/4 inch OD tubing 60-5247-021

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Teledyne ISCO is continually improving its products and reserves the right to change product specifications, replacement parts, schematics, and instructions without notice.



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