

CombiFlash Torrent[®]

The Next Generation in Scale-up Flash Purification

- 0.5 to 300 grams
- Scale up
- Chemical Development
- Manufacturing



Speed • Performance • Reliability



TELEDYNE ISCO
A Teledyne Technologies Company



- ▶ **1 L/min flow rate**
- ▶ **100 psi rated**
- ▶ **300 g purifications**

Performance

Our one liter-per-minute gradient system allows you to separate up to 300 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, solvent, fraction, and waste 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.



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.



Reliable pumps

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

Custom inlets and outlets

Accommodate your laboratory's solvent sources and waste collection.

Patented level sensing

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

Sample load cartridge

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



Sample load pump

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



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.

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.

Fractionation valve for targeted collection

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



Foxy® R2

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



480 mL
bottle racks
shown

Error-free RFID detection

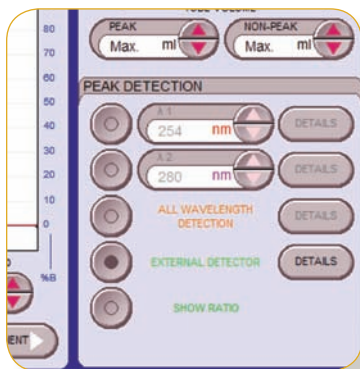
CombiFlash Torrent recognizes RediSep columns and automatically selects an optimized purification method. Rack sensors allow for mixed racks and unlimited fractions with intelligent rack management.

Test tubes
16 to 25 mm
test tube racks



Funnel racks
collect unlimited
fraction volumes

More Options



External detector

Connect any external detector (ELSD, RI, e.g.) with an analog output to cut peaks using the detection parameter of your choice.



Reverse flow kit

Configure the flow path to remove air more rapidly by redirecting the solvent upward through the column.



Pressurized solvent containers

Deliver solvents conveniently while effectively controlling vapor. The containers support our patented liquid level sensing.

Specifications

Sample size:	0.5 to 300 grams
RediSep Rf column sizes:	80 gram to 3 kilogram
Flow rate:	50 – 1000 mL/min
Maximum pressure:	100 psi (6.89 bar)
Detection:	200 – 360 nm (200 – 780 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 inch (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 inches (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:	• 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

Selection Information

CombiFlash Torrent Modules

The CombiFlash Torrent Development-scale Flash chromatography fully integrated module includes fitting adaptors for all compatible column and cartridge sizes, and prime tube assembly.

CombiFlash Torrent Module with UV detection,
200 – 360 nm 68-5240-003

CombiFlash Torrent Module with UV-vis detection,
200 – 780 nm 68-5240-004

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

Preparative rack with 26 ETFE (or ECTFE) funnels

and 50 feet of 3/8-inch vinyl FEP-lined tubing. 60-2137-162

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

Solvent Line Options

Two braided stainless steel inlet lines, 4 feet
for bench top. One waste line. 60-5249-004

Two braided stainless steel inlet lines, 5 feet
for on or below bench top. One waste line 60-5249-005

Two braided stainless steel inlet lines, 9 feet.
One waste line 60-5249-009

Two corrugated tube inlet lines, 4 feet for
benchtop, for 4 liter bottles. One waste line 60-5247-011

Solvent and Waste Cap Sets

Solvent Inlet cap set (2) for 83B closure. 60-5394-510

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

Solvent Inlet cap set (2) for 100 mm closure 60-5394-511

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

Optional Accessories

Two, 10 L pressurized solvent canisters,
compatible with level sensing 60-5247-014

Network cable 480-6545-01

25 feet 1/4-inch OD black, conductive tubing
with fittings 60-5247-012

Reverse flow kit 60-5247-013

External detector interface kit including flow
splitter, cables, and tubing. 68-5247-015

Collection bottles, 480 mL glass, case of 40 60-5237-062



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