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
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.

**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.

**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**

**Test tubes**
16 to 25 mm test tube racks

**Funnel racks**
Collect unlimited fraction volumes
**Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size:</td>
<td>0.5 to 300 grams</td>
</tr>
<tr>
<td>RediSep RF column sizes:</td>
<td>80 gram to 3 kilogram</td>
</tr>
<tr>
<td>Flow rate:</td>
<td>50 – 1000 mL/min</td>
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<tr>
<td>Maximum pressure:</td>
<td>100 psi (6.89 bar)</td>
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<tr>
<td>Gradient:</td>
<td>Binary, high pressure solvent mixing with linear, step, or isocratic capability. Two solvent inlets.</td>
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<tr>
<td>Gradient accuracy:</td>
<td>&lt;2% full scale from 0.2 to 1.0 liter/min.</td>
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<tr>
<td>Sample injection:</td>
<td>Automated injection with options of solid load cartridges, liquid load, or direct injection.</td>
</tr>
<tr>
<td>Controller:</td>
<td>10.4 inch (26.7 cm) touchscreen</td>
</tr>
<tr>
<td>Software:</td>
<td>On-screen method development and control with PeakTrak software</td>
</tr>
<tr>
<td>Fraction collection:</td>
<td>Up to four fraction collectors, fractionation valve, or manual collection</td>
</tr>
<tr>
<td>Solvent management:</td>
<td>Patented, active level sensing for inlet and waste containers</td>
</tr>
<tr>
<td>Module dimensions:</td>
<td>(W x D x H) 18.5 x 17.9 x 28.1 inches (47 x 43.5 x 71.4 cm)</td>
</tr>
<tr>
<td>Module weight:</td>
<td>65 lbs (29.5 kg)</td>
</tr>
<tr>
<td>Operating voltage:</td>
<td>100 VAC 50 Hz, 117 VAC 60 Hz, 234 VAC 50 Hz</td>
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</tbody>
</table>
| 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                                           |

**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.
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 ½-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 ½-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

Call your Teledyne Isco Sales Representative to assist you in configuring an entire system to meet your needs.

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