

The background of the entire page is a deep blue with lighter blue diagonal stripes. Overlaid on this are white line-art illustrations of various chromatography components: a syringe, a vial, a coiled tube, several circular gauges or valves, a large circular manifold with multiple ports, and a detector or sensor unit. The RESTEK logo is positioned in the upper right quadrant.

RESTEK[®]

Pure Chromatography

30
YEARS
1985–2015

LC Accessories

Instrument Replacement Parts

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Preventive Maintenance (PM) Kits for Agilent HPLC Systems

| Description | Model # | Similar to Agilent Part # | qty. | cat.# |
|--|------------------|---------------------------|------|-------|
| Autosampler PM Kit Includes: rotor seal, needle seat, needle assembly, seat cap | 1050 | 01078-68721 | kit | 25259 |
| Autosampler PM Kit Includes: rotor seal, piston seals (2), needle assembly, needle seat, finger caps (3) | 1100, 1200 | G1313-68709 | kit | 25271 |
| Pump PM Kit Includes: PTFE frits (2), outlet cap, gold disk seal, active inlet cartridge, piston seals (4), glass solvent filters (2) | 1050, 1100, 1200 | G1311-68710 | kit | 25270 |
| Pump Maintenance Kit Includes: sapphire plunger (2), piston seals (2), outlet ball check valve, active inlet cartridge, PTFE frits (5) | 1100, 1200 | 5065-4499 | kit | 25915 |



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25916, 25278



25272



25275

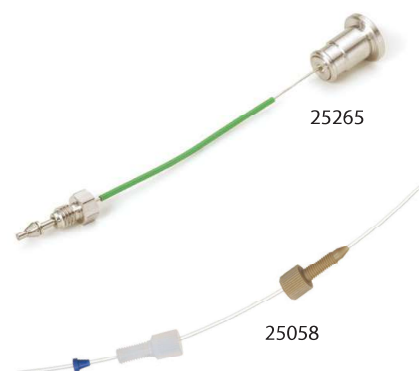


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Injector & Autosampler Supplies for Agilent HPLC Systems

| Description | Model # | Similar to Agilent Part # | qty. | cat.# |
|---|------------------------|---------------------------|------|-------|
| Needle Seat | 1050, 1090 | 79846-67101 | ea. | 25258 |
| Needle Seat Assembly | 1100, 1200, 1220 | G1329-87017 | ea. | 25265 |
| Needle Assembly | 1100, 1200 | G1313-87201 | ea. | 25278 |
| Needle Assembly, 900 µL | 1050, 1100, 1200 | G1313-87202 | ea. | 25916 |
| Rotor Seal, 2-Groove (not for use with 7125 injection valve) | 1050 | 0101-0626 | ea. | 25272 |
| Rotor Seal, 2-Groove | 1100, 1200 | 0100-1853 | ea. | 25275 |
| Rotor Seal (Rheodyne-Style), 3-Groove | 1090 | 1535-4048 | ea. | 25349 |
| Stator Face Assembly | 1100, 1200 | 0100-1851 | ea. | 26424 |
| Connecting Tube | 1050, 1100 | G1311-67304 | ea. | 25058 |
| Injector Lubricant, PTFE, 10 g | 1050, 1100 | 79841-65501 | ea. | 26520 |
| Solvent Inlet Filter, SS | 1050, 1090, 1100, 1200 | 01018-60025 | ea. | 26423 |
| Isolation Seal for Injection Valve | 1100, 1200 | 0100-1852 | ea. | 25917 |



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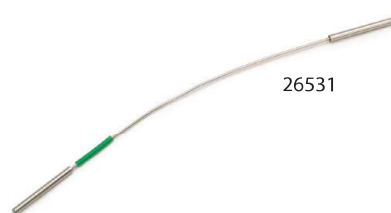
NEW!



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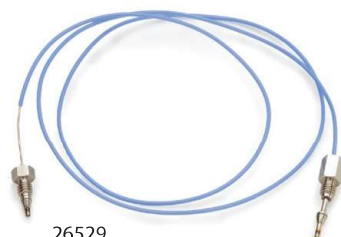
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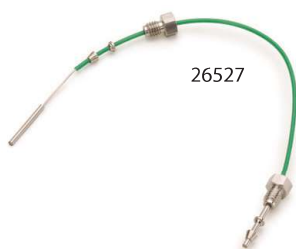
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Capillary Stainless Steel Tubing Assemblies for Agilent HPLC Systems

- Precut, micropolished tubing and preassembled fittings for quick, easy maintenance of your Agilent HPLC systems.
- Meet or exceed manufacturer's performance.

| Description | Model # | Similar to | | qty. | cat.# |
|---|---------|----------------|--------|------|-------|
| | | Agilent Part # | | | |
| Capillary SS Tubing With Fittings, 130 mm x 0.17 mm ID | 1090 | 01090-87305 | ea. | | 26525 |
| Capillary SS Tubing With Fittings, 800 mm x 0.17 mm ID | 1050 | 01078-87305 | ea. | | 26526 |
| Capillary SS Tubing With Fittings, 180 mm x 0.17 mm ID | 1100 | G1313-87305 | ea. | | 26527 |
| Capillary SS Tubing With Fittings, 700 mm x 0.25 mm ID | 1050 | 01018-67305 | ea. | | 26528 |
| Capillary SS Tubing With Fittings, 700 mm x 0.25 mm ID | 1050 | 01078-87306 | ea. | | 26529 |
| Seat Capillary, SS Tubing, 0.17 mm ID | 1050 | 01078-87303 | ea. | | 26530 |
| Capillary SS Tubing, 105 mm x 0.17 mm ID | — | 5021-1816 | ea. | | 26531 |
| Mixing Capillary Assembly | 1100 | G1312-67302 | ea. | | 26532 |
| Capillary SS Tubing, Valve to Metering Head | 1100 | G1313-87301 | ea. | | 26533 |
| Capillary SS Tubing, 150 mm x 0.17 mm ID | — | 5021-1817 | ea. | | 26534 |
| Capillary SS Tubing, 280 mm x 0.17 mm ID | — | 5021-1818 | ea. | | 26535 |
| Capillary SS Tubing, 400 mm x 0.17 mm ID | — | 5021-1819 | ea. | | 26536 |
| 1/16" Fitting, Front and Back Ferrules, Stainless Steel | — | 5062-2418 | 10-pk. | | 26537 |



Pump Supplies for Agilent HPLC Systems

| Description | Model # | Similar to Agilent Part # | qty. | cat.# |
|---|------------------|------------------------------|--------|-------|
| Piston Seals, PTFE w/Graphite, Black* | 1050, 1100, 1200 | 5063-6589 | 2-pk. | 22482 |
| Piston Seals, PTFE w/Graphite, Black* | 1050, 1100, 1200 | 5063-6589 | 10-pk. | 22483 |
| Piston Seals, Black, ASI | 1050, 1100 | 5062-8516 | 10-pk. | 25176 |
| Piston Seals, Black | 1090 | 5062-2494 | 4-pk. | 25347 |
| Pump Block Piston Seal | 1050, 1100, 1200 | 0905-1420 | 2-pk. | 25918 |
| Seal Wash Kit, Binary Pump (4 seals, 4 gaskets) | 1050, 1100, 1200 | — | kit | 25268 |
| Seal Wash Kit (2 seals, 2 gaskets) | 1050, 1100, 1200 | — | kit | 25269 |
| Wash Seal | 1050, 1100, 1200 | 0905-1175 | ea. | 25277 |
| Active Inlet Cartridge | 1050, 1100, 1200 | 5062-8562 | ea. | 26393 |
| Seal, Gold Disk (outlet) | 1050, 1100, 1200 | 5067-4728 | ea. | 25889 |
| Outlet Cap | 1050, 1100, 1200 | 5062-2485 | 4-pk. | 25139 |
| Outlet Cap & Gold Seal Assembly | 1050, 1100, 1200 | — | 2-pk. | 25890 |
| Outlet Ball Valve, Binary Pump | 1100, 1200 | G1312-60012 | ea. | 25267 |
| Outlet Ball Valve | 1050, 1100, 1200 | G1311-60012 | ea. | 25276 |
| Sieves for Outlet Valve | 1100, 1200 | 5063-6505 | 10-pk. | 25266 |
| Check Valve Cartridge Assembly | 1090 | 79835-67101 | ea. | 25344 |
| Frits, PTFE | 1050, 1100, 1200 | 01018-22707 | 5-pk. | 25466 |
| Plunger Assembly | 1050, 1100, 1200 | 5063-6586 | ea. | 25273 |
| Sapphire Piston | 1090 | 3980-0672 | ea. | 25345 |

*Graphite-filled PTFE; best for organic solvents.

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Lamps for Agilent HPLC Systems

| Description | Model # | Similar to Agilent Part # | qty. | cat.# |
|---|-------------------|------------------------------|------|-------|
| Detector Lamp, 1090 DA, 1050 VW/DA/MWD | 1090, 1050 | 79883-60002 | ea. | 25260 |
| Lamp, DAD G1315A, G1365A* | 1100, 1200 | 2140-0590 | ea. | 25261 |
| Lamp, VWD G1314A | 1100, 1200 | G1314-60100 | ea. | 25262 |
| Lamp, DAD Long-Life Deuterium (2,000 hours) | 1100, 1200 DAD | 5181-1530 | ea. | 25399 |
| 8453 Deuterium Lamp | — | 2140-0605 | ea. | 25263 |
| Deuterium Lamp (2,000 hours)* | 1100 DAD/MWD/1200 | 2140-0813 | ea. | 25888 |

*Compatible with 1260.

Other Supplies for Agilent HPLC Systems

| Description | Model # | Similar to Agilent Part # | qty. | cat.# |
|----------------------|---------|------------------------------|------|-------|
| Bottle Head Assembly | — | G1311-60003 | ea. | 25059 |

Instrument Replacement Parts for PerkinElmer HPLC Systems

Injector & Autosampler Supplies for PerkinElmer HPLC Systems

| Description | Model # | Similar to PE Part # | qty. | cat.# |
|-------------|---------------------|----------------------|------|-------|
| Needle | PE Series 200 Pumps | N2930023 | ea. | 25432 |



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Pump Supplies for PerkinElmer HPLC Systems

| Description | Model # | Similar to PE Part # | qty. | cat.# |
|---|---|----------------------|------|-------|
| Low-Pressure Seal, Gold* | Int. 4000, 1, 10, 2, 200 Series, 250, 3, 3B, 4, 400, 410, 620 | 09907339 | ea. | 25435 |
| Standard High-Pressure Seal, Gold* | Int. 4000, 1, 10, 2, 200 Series, 250, 3, 3B, 4, 400, 410, 620 | 09907324 | ea. | 25434 |
| Standard Pump Seal Kit | 200 Series | N2910383 | kit | 26425 |
| High-Pressure Seal Kit Includes: pump seals (4), backup rings (4), O-rings (4) | Int. 4000, 1, 10, 2, 200 Series, 250, 3, 3B, 4, 400, 410, 620 | 0254-0275 | kit | 25433 |
| Inlet Check Valve | Int. 4000, 1, 10, 2, 200 Series, 250, 3, 3B, 4, 400, 410, 620, Series 200 Micropump | 02540177 | ea. | 25438 |
| Outlet Check Valve | PE 200, 4, 250, 400, 410, 620 | 02540197 | ea. | 25437 |

*Ultra-high molecular weight polyethylene (UHMWPE); increased resistance to abrasion; best for buffers.



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Deuterium Lamps for PerkinElmer HPLC Systems

| Description | Model # | Similar to PE Part # | qty. | cat.# |
|----------------|---|----------------------|------|-------|
| Deuterium Lamp | Lambda-2, 5, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 25, 40, 800, 900 | B016-0917 | ea. | 25436 |
| Deuterium Lamp | 200 Series, 785A | N2920149 | ea. | 25431 |



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Injector & Autosampler Supplies for Shimadzu HPLC Systems

| Description | Model # | Similar to Shimadzu Part # | qty. | cat.# |
|---------------------|----------------------------|----------------------------|------|-------|
| Needle Seal, Vespel | LC-2010, SIL-10ADvp, 10AXL | 228-33355-04 | ea. | 25468 |
| Needle Seal, PEEK | SIL-10ADvp, 10AXL, HT | 228-33355-01 | ea. | 25919 |
| Needle Seal, PEEK | SIL-2010A/C HT, 20A/AC | 228-42325-01 | ea. | 25920 |
| Rotor Seal | SIL-10ADvp | 228-21217-97 | ea. | 24986 |
| Rotor Seal Assembly | SIL-10A, 10AXL, 10Ai | 228-21217-91 | ea. | 25469 |
| Stator Assembly | SIL-10A, 10AXL, 10Ai | 228-21220-91 | ea. | 25470 |
| Syringe, 500 µL | SIL-10A, 10AXL, 10Ai | 228-25237-04 | ea. | 25471 |

Deuterium Lamps for Shimadzu HPLC Systems

| Description | Model # | Similar to Shimadzu Part # | qty. | cat.# |
|----------------|--|----------------------------|------|-------|
| Deuterium Lamp | SPD-10, 10A, 10AVvp, SPD-20A, SPD-20AV | 228-34016-02 | ea. | 25284 |

Protect your column and your UHPLC performance with UltraShield and UltraLine UHPLC filters

A cost-effective way to extend the lifetime of any UHPLC column without sacrificing your UHPLC performance on any LC system.



See **page 188**.

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Instrument Replacement Parts for Shimadzu HPLC Systems



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NEW!



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NEW!



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NEW!



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Pump Supplies for Shimadzu HPLC Systems

| Description | Model # | Similar to Shimadzu Part # | qty. | cat.# |
|---|--|----------------------------|------|-------|
| Plunger Seal, Polyethylene, Gold** | LC-10Ai, 10AS, 10AT, 10ATvp, LC-7A | 228-21975-00 | ea. | 25290 |
| Plunger Seal, Black* | LC-10AD, 10ADvp, LC-20AD/AB, LC-600, LC-2010 A/C HT, LC-9A | 228-35146-00 | ea. | 24980 |
| Plunger Seal, Gold** | LC-10ADvp, LC-20AD/AB | 228-32628-00 | ea. | 24981 |
| Plunger Seal, Black* | LC-10ATvp, LC-20AT, LC-HT, SIL-10ADvp, SIL-2010 A/C HT, SIL-20A/AC, SIL-HT | 228-35145-00 | ea. | 24985 |
| Plunger Rinse Seal | LC-10Ai, LC-10AS, LC-10AT, LC-10ATvp | 228-28499-00 | ea. | 25292 |
| Inlet Check Valve | LC-6A, LC-10AS | 228-12353-91 | ea. | 25287 |
| Inlet Check Valve | LC-600, LC-9A, LC-10AD | 228-18522-91, 228-33492-91 | ea. | 25295 |
| Inlet Check Valve | LC-10ADvp | 228-39093-92 | ea. | 24984 |
| Inlet Check Valve | LC-10AT, LC-10ATvp | 228-32166-91 | ea. | 26521 |
| Inlet Check Valve | LC-20AD/AB XR | 228-48249-91, 228-45704-91 | ea. | 26426 |
| Outlet Check Valve | LC-6, LC-10AS, LC-8A | 228-09054-93 | ea. | 25288 |
| Outlet Check Valve Rebuild Kit Includes: ruby ball (2), seat (2), thin washer (2), thick washer (2), retainer washer (2) | LC-6A, LC-10AS | 228-11200-91 | kit | 25289 |
| Outlet Check Valve | LC-600, LC-9A, LC-10AD, LC-10AT | 228-18522-92, 228-32531-92 | ea. | 25282 |
| Outlet Check Valve | LC-10ADvp, LC-10ATvp | 228-34976-91 | ea. | 24983 |
| Outlet Check Valve | LC-20AD/AB XR | 228-45705-91, 228-45563-91 | ea. | 26427 |
| Sapphire Plunger | LC-10AS, LC-7A | 228-17019-93 | ea. | 25291 |
| Sapphire Plunger | LC-600, LC-9A, LC-10AD | 228-18523-91 | ea. | 25294 |
| Sapphire Plunger | LC-20AT | 228-35009-93 | ea. | 25921 |
| Sapphire Plunger | LC-20AD/AB, LC-2010 | 228-35601-93 | ea. | 25922 |
| Sapphire Plunger | LC-2010A/C HT, LC-HTSIL-10ADvp, SIL-20A/AC | 228-35010-91 | ea. | 25923 |
| Plunger Assembly, Ceramic | LC-10ADvp | 228-35601-91 | ea. | 25472 |
| Plunger Assembly, Ceramic | LC-10ATvp | 228-35009-92 | ea. | 25473 |
| Plunger Assembly, Sapphire | LC-10ADvp | 228-35601-92 | ea. | 24982 |
| Suction Filter, SS | LC-10ADvp, 10ATvp, 20AD/AB, 2010A/C HT | 228-45707-91 | ea. | 25924 |

*Graphite-filled PTFE; best for organic solvents.

**Ultra-high molecular weight polyethylene (UHMWPE); increased resistance to abrasion; best for buffers.

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NEW!

**Injector & Autosampler Supplies** for Thermo HPLC Systems

| Description | Model # | Similar to Thermo Part # | qty. | cat.# |
|------------------------------------|---|--------------------------------|------|-------|
| Rotor Seal Assembly, Rheodyne 7010 | TSP AS100, 300, 1000, 3000, 3500, 8875, and 8880 Autosamplers | 1535-4048, 7010-039, 2508-0360 | ea. | 25481 |
| Syringe Assembly, 250 µL | 1000, CM3000, CM3500, AS100 | A3588-020 | ea. | 25482 |
| Syringe, 500 µL | 8800 Series | 3301-0100 | ea. | 25483 |

**Lamps** for Thermo HPLC Systems

| Description | Model # | Similar to Thermo Part # | qty. | cat.# |
|-------------|---|--------------------------|------|-------|
| Lamp, UV | Spectrachrom 200, UV100, UV1000, UV150, UV200, UV2000, UV3000 | 9551-0023 | ea. | 25484 |

**Pump Supplies** for Thermo HPLC Systems

| Description | Model # | Similar to Thermo Part # | qty. | cat.# |
|--|---|--------------------------|------|-------|
| Inlet Check Valve Assembly | 8800, 8810, ISOCHROM, P1000, P2000, P4000 | A3495-010 | ea. | 25474 |
| Outlet Check Valve Assembly | 8700, 8800, 881, ISOCHROM | A3490-010 | ea. | 25475 |
| Transducer Check Valve Assembly | P1000, P2000, P4000 | A3990-010 | ea. | 25479 |
| Check Valve Cartridge | 3000, 3200, 3500, 4000, 4100, Constametric I, II, and III | 900946 | ea. | 25485 |
| Piston | 8800, 8810, ISOCHROM, P1000, P2000, P4000 | A3102-010 | ea. | 25476 |
| Sapphire Plunger | CM3000, CM3200, CM3500, CM4000 | 801306 | ea. | 25486 |
| Back-Up Seal | 8800, 8810, ISOCHROM, P1000, P2000, P4000 | A2963-010 | ea. | 25477 |
| Plunger Seal, Gold Superseal** | 8800, 8810, ISOCHROM, P1000, P2000, P4000 | A2962-010 | ea. | 25478 |
| Plunger Seal Kit, Gold** Includes: SS plunger seal spacer, Rulon plunger seal spacer (2), O-ring, gold plunger seal | LDC Constametric Pumps | 801892001 | kit | 25487 |
| Plunger Seal, Black* | CM3000, CM3200, CM3500, CM4000 | 206129001 | ea. | 25488 |
| Plunger Seal, Gold** | CM3000, CM3200, CM3500, CM4000 | 206156001 | ea. | 25489 |
| Kel-F Washer | P1000, P2000, P4000 | A4848-010 | ea. | 25480 |



*Graphite-filled PTFE; best for organic solvents.

**Ultra-high molecular weight polyethylene (UHMWPE); increased resistance to abrasion; best for buffers.

Instrument Replacement Parts for Waters HPLC & ACQUITY UPLC® Systems



Preventive Maintenance (PM) Kits for Waters HPLC Systems

| Description | Model # | Similar to Waters Part # | qty. | cat.# |
|---|---------------------|--------------------------|------|-------|
| 2690/2695 Pump & Autosampler PM Kit Includes: sapphire plungers (2), seal wash plunger seals (4), head plunger seals (4), wash tube seals (4), battery, sparge diffuser, filter insert, face seals (4), solvent reservoir 10 µm filters (4), 250 µL syringe, check valve cartridges (2), wash tube seal, seal wash tube, PTFE washer, filter retainer, lower wash seal frit, needle wash frit, TFE washer, needle assembly, gold injector seals (2), stainless steel ferrule, compression screw | Alliance 2690, 2695 | WAT270944 | kit | 25143 |
| 717 Autosampler PM Kit Includes: seal pack assembly, tube assembly (0.020" ID), needle, needle compression screw, 0.062 stainless steel ferrule, pre-column filter assembly, filter insert, 250 µL WISP syringe | 717 Autosampler | WAT052669 | kit | 25145 |
| 600 Pump PM Kit Includes: PerformancePLUS cartridges (4), sparge diffusers (4), Super Seals (2), solvent reservoir 10 µm filters (4), sapphire plungers (2), reference valve button, valve disk spacer, valve disk, TFE ball plug, TFE seat, ruby ball, inlet tube body assembly manifold insert, insert seal, belleville washers (2), flat washer | 600 Pump | WAT052675 | kit | 25144 |
| 616 Pump PM Kit Includes: sapphire plungers (2), sparge diffusers (4), solvent reservoir 10 µm filters (4), plunger seals (2), plunger wash seals (2), O-rings (2), backup rings (2), check valve cartridges (4) | 616 Pump | WAT052672 | kit | 25146 |
| 515 Pump PM Kit Includes: PerformancePLUS check valves (4), sparge diffuser, solvent reservoir 10 µm filter, sapphire plungers (2), plunger seals (2), pivot inserts (2), pivot guides (2), washer (2), plunger springs (2), retaining rings (2) | 515 Pump | WAT052587 | kit | 26519 |
| 1525 Pump PM Kit Includes: sapphire plungers (4), check valve cartridges (8), plunger seals (4), solvent reservoir 10 µm filters (2), reference valve button, valve disk spacer, valve disk | 1525 Pump | 201000114 | kit | 26430 |

Simplify Routine LC Maintenance

Preventive Maintenance Kits

- Significant savings over instrument manufacturer prices.
- High-quality components in every kit.
- Wide range of options for HPLC systems and pumps.

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Injector & Autosampler Supplies for Waters HPLC & ACQUITY UPLC® Systems

| Description | Model # | Similar to Waters Part # | qty. | cat.# |
|---|-------------------------------|-----------------------------|------|-------|
| Needle Assembly, 0.010 mm ID | ACQUITY | 700002644 | ea. | 25942 |
| Sample Loop, 10 µL | ACQUITY, nanoACQUITY | 430001326 | ea. | 25943 |
| Wash Station O-Ring | ACQUITY, nanoACQUITY | 700002572 | ea. | 25944 |
| Metering Syringe, 100 µL | ACQUITY, nanoACQUITY | 700002570 | ea. | 25945 |
| Tube Assembly, Inject Outlet | ACQUITY | 430001084 | ea. | 25946 |
| Tube Assembly, System Outlet | ACQUITY | 430001486 | ea. | 25947 |
| Seal Pack Rebuild Kit, Without Seal Wash Tube Assembly Includes: wash tube seal, seal wash tube, PTFE washer, filter retainer, lower wash seal frit, needle wash frit, TFE washer, needle, injector seal (2), compression screw, ferrule | 2690, 2695 | WAT271019 | kit | 25495 |
| Seal Pack With Needle Includes: seal pack assembly, pre-column filter assembly, needle, 0.020" ID tube assembly, compression screw, ferrule | 717, LC Module 1 | WAT045559 | ea. | 25496 |
| Vespel Rotor Seal | 1090, 7000, 7010, 7040, 7067 | 7010-039 | ea. | 25279 |
| Vespel Rotor Seal | 7125, 7126, 7725, 7725i, 9725 | 7125-047 | ea. | 25280 |
| Isolation Seal | 7010 | 7010-015 | ea. | 25281 |

Instrument Replacement Parts for Waters HPLC & ACQUITY UPLC® Systems

**Pump Supplies** for Waters HPLC & ACQUITY UPLC® Systems (Also see pages 332–333.)

| Description | Model # | Similar to Waters Part # | qty. | cat.# |
|--|--|--------------------------|-------|-------|
| Head Plunger Seal Kit Includes: head plunger seals (2), back-up washers (2) | ACQUITY, nanoACQUITY | 700002599 | kit | 26428 |
| Wash Seal | ACQUITY, nanoACQUITY | 700002598 | 2-pk. | 26429 |
| Pump O-Ring | ACQUITY, nanoACQUITY | WAT076152 | ea. | 25951 |
| In-Line Filter Assembly, Stainless Steel Frit | ACQUITY, nanoACQUITY | 289003547 | ea. | 25952 |
| Filter Frit Cartridge, Stainless Steel | ACQUITY | 700002913 | ea. | 25953 |
| Solvent Bottle Filters | ACQUITY | 700003616 | 7-pk. | 25954 |
| Tube Assembly, SSV to In-line Filter | nanoACQUITY | 430001470 | ea. | 25948 |
| Tube Assembly, Transducer to Check Valve, BSM | ACQUITY, nanoACQUITY | 430001121 | ea. | 25949 |
| Tube Assembly, Transducer to Check Valve, QSM | ACQUITY | 430002357 | ea. | 25950 |
| Tube Assembly, SSV to I2V | ACQUITY | 430001443 | ea. | 25941 |
| Super Seal for Analytical Heads | M6KA, 1515, 1525, 510, 515, 590, 600, 610, LC Module 1 | WAT022946 | ea. | 25374 |
| Plunger Seal, Gold** | 1515, 1525, 510, 515, 600, 610, LC Module 1 | — | ea. | 25375 |
| Plunger Seal, Black* | 1515, 1525, 510, 515, 600, 610, LC Module 1 | WAT026613 | ea. | 25378 |
| Plunger Seal, Gold for EF Heads** | 510, 515, 590, 600, 610, LC Module 1 | 700002282 | ea. | 25380 |
| Pump Seal Kit Includes: plunger seals (2), wash seals (2), O-rings (2), back-up rings (2) | 616, 1525 Micro | WAT034515 | kit | 25497 |
| Seal Wash Plunger Seals | 2690, 2695, 2790, 2795 | WAT270160, WAT271018 | 2-pk. | 25386 |
| Head Plunger Seals, Gold | 2690, 2695, 2790, 2795 | WAT270789, WAT270938 | 2-pk. | 25387 |
| Head Plunger Seals, Black | 2690, 2695, 2790, 2795 | WAT271066 | 2-pk. | 25388 |
| Seal Wash Face Seal | 2690, 2695, 2790, 2795 | WAT271017 | ea. | 25428 |
| Wash Tube Seal Kit | 2690, 2695, 2790, 2795 | WAT270940 | 4-pk. | 25429 |
| Face Seals Replacement Kit | 2690, 2695, 2790, 2795 | WAT270163, WAT270939 | 4-pk. | 26547 |

*Graphite-filled PTFE; best for organic solvents.

**Ultra-high molecular weight polyethylene (UHMWPE); increased resistance to abrasion; best for buffers.

**Pump Supplies** for Waters HPLC & ACQUITY UPLC® Systems (cont.)

| Description | Model # | Similar to Waters Part # | qty. | cat. # |
|--|--|-----------------------------|-------|--------|
| Primary Check Valve | ACQUITY, nanoACQUITY | 700002596 | 2-pk. | 25955 |
| Accumulator Check Valve (Double Ball & Seat) | ACQUITY, nanoACQUITY | 700002968 | 2-pk. | 25956 |
| I2 Check Valve Cartridge | ACQUITY | 700005165 | ea. | 25957 |
| Inlet Check Valve Assembly | M6KA, 510, 515, 590, 600, 610, LC Module 1 | WAT033679, WAT025214 | ea. | 25360 |
| Inlet Check Valve Housing | M6KA, 510, 515, 590, 600, 610, LC Module 1 | WAT025203 | ea. | 25361 |
| Inlet Check Valve Rebuild Kit Includes: blue washer (2), retainer gasket (2), Kel-F insert (2), ruby ball (2), TFE seat (2), TFE washer (2) | M6KA, 510, 515, 590, 600, 610, LC Module 1 | WAT060495 | kit | 25362 |
| Outlet Check Valve Assembly (Actuator Style) | M6KA, 510, 590 | WAT025028 | ea. | 25363 |
| Outlet Check Valve Housing (Actuator Style) | M6KA, 510, 590 | WAT025212 | ea. | 25364 |
| Outlet Check Valve Rebuild Kit (Actuator Style) Includes: 2 µm cup filter (2), compression spring (2), actuator (2), TFE washer actuator seat (2), TFE washer (2) | M6KA, 510, 590 | WAT026016 | kit | 25365 |
| Outlet Check Valve Assembly (Ball & Seat Style) | 1525EF, 510, 515, 590, 600, 610, LC Module 1 | WAT025216 | ea. | 25366 |
| Outlet Check Valve Housing (Ball & Seat Style) | 1525EF, 510, 515, 590, 600, 610, LC Module 1 | WAT025207 | ea. | 25367 |
| Outlet Check Valve Rebuild Kit (Ball & Seat Style) Includes: 2 µm cup filter (2), ruby ball (2), ball seat (2), Kel-F insert (2), blue washer (2), washer (2) | 1525EF, 510, 515, 600, 610, LC Module 1 | WAT026014 | kit | 25368 |
| Inlet Check Valve Assembly, 225 µL (Extended Flow) | 1525EF, 510, 515, 600, 610, LC Module 1 | WAT060307 | ea. | 25369 |
| Check Valve Rebuild Kit (Extended Flow) Includes: 3/16" EF ruby ball (2), EF ball seat (2), EF guide seal (2), EF ball guide (2), EF housing seal (2) | 510, 590, 600, LC Module 1 | WAT088223 | kit | 25371 |
| PerformancePLUS Check Valve Housing | 1515, 1525, 510, 515, 525, 600, 610 | — | ea. | 25372 |
| PerformancePLUS Check Valve Cartridge | 1515, 1525, 2690, 2695, 2795, 510, 515, 600, 610 | 700000254 | 2-pk. | 25370 |
| Check Valve Cartridges | 2690, 2695, 2790, 2795 | WAT270941 | 2-pk. | 25373 |
| Check Valve Cartridge, Stainless Steel | 616 | WAT024960 | ea. | 25498 |

Instrument Replacement Parts for Waters HPLC & ACQUITY UPLC® Systems

**Pump Supplies** for Waters HPLC & ACQUITY UPLC® Systems (cont.)

| Description | Model # | Similar to Waters Part # | qty. | cat.# |
|--|---|---------------------------------------|-------|-------|
| Sapphire Plungers | ACQUITY, nanoACQUITY | 700002600 | 2-pk. | 25958 |
| Sapphire Plunger | M6KA, 510, 590, 600, 610, LC Module 1 | WAT025656, WAT069511 | ea. | 25381 |
| Sapphire Plunger (Extended Flow) | 1525EF, 510, 515, 590, 600, 610, LC Module 1 | WAT060304 | ea. | 25382 |
| Sapphire Plunger Assembly Kit Includes: sapphire plunger, pivot insert, pivot guide, washer, spring, retaining ring | 515, 1515, 1525 | WAS207069 | kit | 25384 |
| Sapphire Plunger | 616, 625, 626, 1525 Micro | WAT031788 | ea. | 25420 |
| Sapphire Plunger | 2690, 2695, 2790, 2795, 2796 | WAT270488, WAT271067, WAT270959 | ea. | 25385 |
| Indicator Manifold Kit Includes: TFE ball plug, TFE seat, ruby ball, manifold insert, TFE insert seal, belleville washer (2), flat washer, inlet tube body assembly | M45, 501, 510, 515, 590, 600, 610 | WAT060448 | kit | 25412 |
| Reference Valve Rebuild Kit Includes: ref valve button, valve disk spacer, valve disk | 600 Pump | WAT025746 | kit | 25492 |
| Ferrule, Stainless Steel | — | WAT022330 | ea. | 25417 |
| Compression Screw, Stainless Steel | — | WAT025313 | ea. | 25493 |
| Battery | 2690, 2695, 717, 486, 484 | WAT080443 | ea. | 25494 |



25404



25410



25408



25409

Detector Supplies for Waters HPLC & ACQUITY UPLC® Systems

| Description | Model # | Similar to Waters Part # | qty. | cat. # |
|--|------------|-----------------------------|------|--------|
| Xenon Lamp (without holder or mirror) | 470 | — | ea. | 25404 |
| Xenon Lamp | 474 | — | ea. | 25405 |
| Deuterium Lamp, Long Life (2,000 hours)* | 486 | WAT080678 | ea. | 25410 |
| Deuterium Lamp | 996, 2996 | WAT052586 | ea. | 25408 |
| Deuterium Lamp | 2487, 2488 | WAS081142 | ea. | 25409 |

*Standard lamps have nominal 1,000-hour life.

Thomson SINGLE StEP® Filter Vials

Sample filtration that's economical, eco-friendly, and fast!



- Easy-to-use vials offer fast sample filtration and require only a squeeze of your fingers.
- Color-coded caps allow easy identification of 0.2 µm or 0.45 µm membranes in PVDF, PTFE, PES, or nylon.
- Pre-slit PTFE/silicone caps help eliminate broken autosampler needles and cored septa.
- Low dead volume units feature rugged polypropylene vial and insert with 450 µL loading capacity.
- Fit most standard 12x32 mm autosamplers, including UHPLC instruments.

See **page 410**.
www.restek.com/singlestep

EXP® Reusable Fittings for HPLC & UHPLC for 10-32 fittings and 1/16" tubing

- Hand-tight fitting style achieves effortless HPLC seals—no tools needed for a 8,700+ psi seal.
- Both hand-tight and hex-head styles wrench-tighten for reliable UHPLC use up to 20,000+ psi!
- Patented ferrule can be installed repeatedly without compromising high-pressure seal.
- Hybrid design combines the durability of titanium with the sealing ability of PEEK.
- Cutting-edge system provides ZDV (zero dead volume) connection to any 10-32 female port.
- Compatible with 1/16" PEEK and stainless steel tubing.

Restek is pleased to offer the reusable EXP® fitting system from Optimize Technologies for the ultimate in easy, reliable LC connections!

The patented hybrid EXP® ferrule combines the durability of titanium with the sealing ability of PEEK for a swage that can be reused over and over again. And, when you choose the hand-tight fitting style, the special EXP® nut offers an effortless seal up to 8,700+ psi (600+ bar)—no tools needed! For a reliable 20,000+ psi (1,400+ bar) UHPLC connection with either fitting style, simply wrench-tighten an extra 1/4 to 1/2 turn.

EXP® ferrules should only be used with genuine EXP® nuts. When used with an EXP® nut, the EXP® ferrule provides repeated ZDV (zero dead volume) connections to any 10-32 female threaded port, including Restek® LC columns, 6-port injection valves, and more. To accommodate varying port depths, simply hold the tubing fully bottomed in the port and tighten as instructed.

WARNING: Do not use EXP® ferrules with standard nuts. Failure to use EXP® fittings according to the included instructions may result in unsafe UHPLC connections and/or non-ZDV connections.

EXP® Hand-Tight Fittings

| Description | qty. | cat.# |
|--|--------|-------|
| EXP Hand-Tight Fitting (Nut w/Ferrule) | ea. | 25937 |
| EXP Hand-Tight Fitting (Nut w/Ferrule) | 10-pk. | 25938 |
| EXP Hand-Tight Nut (w/o Ferrule) | ea. | 25939 |

EXP® Hex-Head Fittings

| Description | qty. | cat.# |
|--|--------|-------|
| EXP Std. Hex-Head Fitting (Nut w/Ferrule) | ea. | 25926 |
| EXP Std. Hex-Head Fitting (Nut w/Ferrule) | 10-pk. | 25927 |
| EXP Short Hex-Head Fitting (Nut w/Ferrule) | ea. | 25928 |
| EXP Short Hex-Head Fitting (Nut w/Ferrule) | 10-pk. | 25929 |
| EXP Long Hex-Head Fitting (Nut w/Ferrule) | ea. | 25930 |
| EXP Long Hex-Head Fitting (Nut w/Ferrule) | 10-pk. | 25931 |
| EXP Std. Hex-Head Nut (w/o Ferrule) | ea. | 25932 |
| EXP Short Hex-Head Nut (w/o Ferrule) | ea. | 25933 |
| EXP Long Hex-Head Nut (w/o Ferrule) | ea. | 25934 |

EXP® Hand-Tight Coupler

| Description | qty. | cat.# |
|---|------|-------|
| EXP Hand-Tight Coupler (2 Nuts, 2 Ferrules, 1/16" x 0.005" ID Tubing) | ea. | 25940 |

EXP® Titanium Hybrid Replacement Ferrules

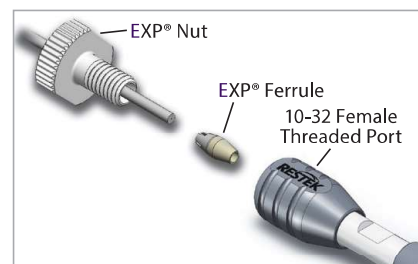
| Description | qty. | cat.# |
|-----------------------------|--------|-------|
| EXP Titanium Hybrid Ferrule | ea. | 25935 |
| EXP Titanium Hybrid Ferrule | 10-pk. | 25936 |

Hybrid Ferrule U.S. Patent No. 8201854, Optimize Technologies. Optimize Technologies EXP Holders are Patent Pending. Other U.S. and Foreign Patents Pending. The Opti- prefix is a registered trademark of Optimize Technologies, Inc.

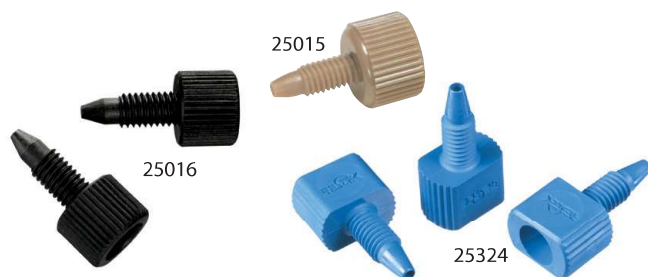
A Raptor™ LC guard column cartridge in an EXP® holder is the **Ultimate in Column Protection.**

See pages 155–159.

Raptor™
LC Columns
Selectivity Accelerated



LC ACCESSORIES Connectors



Universal 10-32 PEEK Column Connectors and Plugs

Universal PEEK connectors allow easy installation of all 1/16" tubing, including stainless steel, up to 5,000 psi.

| Description | qty. | cat.# |
|---|--------|-------|
| PEEK Column Connector (beige, round body) | 10-pk. | 25015 |
| PEEK Column Plug (black) | 10-pk. | 25016 |
| PEEK Finger-Tight Fittings (blue, flat-sided) | 10-pk. | 25324 |



Rheodyne® Style Nut and Ferrule

Replacement long nut for connecting stainless steel tubing to a Rheodyne® 6-port valve or other Rheodyne® part.

| Description | qty. | cat.# |
|------------------------------|--------|-------|
| 1/16" Rheodyne Style Nut | 10-pk. | 25095 |
| 1/16" Rheodyne Style Ferrule | 10-pk. | 25096 |



Zero Dead Volume Valco® Internal Union

Ends of tubing seat squarely at bottoms of fitting details. Made of 300-series stainless steel. For use with 1/16" OD tubing. Stainless steel ferrules included.

| Description | Union Bore | Valco # | qty. | cat.# |
|----------------|------------|---------|------|-------|
| Internal Union | 0.15 mm | ZU1XC | ea. | 20147 |
| Internal Union | 0.25 mm | ZU1C | ea. | 20148 |
| Internal Union | 0.75 mm | ZU1 | ea. | 20149 |
| Internal Union | 1/16" | ZU1T | ea. | 20150 |



PEEK Union Connector

Quickly and reliably connect two pieces of 1/16" tubing. 0.3 mm union bore. End fittings included.

| Description | qty. | cat.# |
|----------------------------|-------|-------|
| PEEK Union Connector 1/16" | 2-pk. | 25323 |



LC-MS Gas Generators From Restek

Affordable

Generators are cost-effective and quickly pay for themselves.

Reliable

Dependably produce a continuous supply of high-purity carrier and fuel gas.

Safe

Eliminate hazardous cylinders and free up valuable lab space.

See **page 345**.

www.restek.com/gas



LC Stainless Steel Capillary Tubing

- 316-grade stainless steel.
- Precise precut lengths.
- Smooth surface finish.
- Ultra clean.

Whether you need to replace system tubing as part of your troubleshooting or want to reduce the dwell volume of your system as you move to narrower columns, Restek has the quality tubing in the lengths and IDs you need. Each ID is color coded, so it is easy to identify and replace correctly.

| | | 0.005" ID (red) max. 21,600 psi | 0.007" ID (gray) max. 20,900 psi | 0.010" ID (blue) max. 19,700 psi | 0.020" ID (yellow) max. 15,800 psi |
|-----------------|-------|--|---|---|---|
| Length | qty. | cat.# | cat.# | cat.# | cat.# |
| 1/16" OD Tubing | | | | | |
| 5 cm | 3-pk. | 25240 | 25244 | 25248 | 25252 |
| 10 cm | 3-pk. | 25241 | 25245 | 25249 | 25253 |
| 20 cm | 3-pk. | 25242 | 25246 | 25250 | 25254 |
| 30 cm | 3-pk. | 25243 | 25247 | 25251 | 25255 |



Tubing Dressing Tool

Opens stainless steel tubing bore and removes burrs.
For 1/16" OD tubing or 1/8" OD tubing.

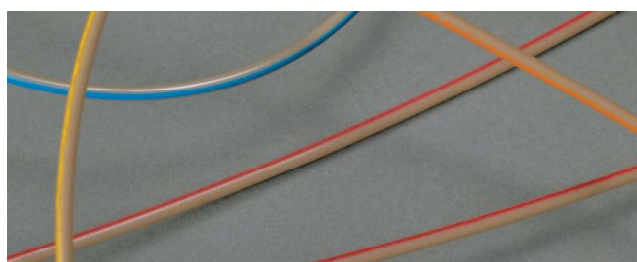
| Description | Size | qty. | cat.# |
|----------------------|--------------------------------|------|-------|
| Tubing Dressing Tool | 1/16" | ea. | 20188 |
| Replacement Insert | for 1/16" Tubing Dressing Tool | ea. | 20189 |
| Tubing Dressing Tool | 1/8" | ea. | 20190 |
| Replacement Insert | for 1/8" Tubing Dressing Tool | ea. | 20191 |



PTFE Tubing

- Ideal for mobile phase inlet lines.
- Chemically inert.
- Use to 500 psi (3,447 kPa) and 80 °C.

| Description | OD | ID | Length | qty. | cat.# |
|-------------|------|-----------------|--------|------|-------|
| PTFE Tubing | 1/8" | 0.063" (1.6 mm) | 3 m | 3 m | 25306 |
| PTFE Tubing | 1/8" | 0.094" (2.4 mm) | 3 m | 3 m | 25307 |



Inert PEEK Tubing

- Replaces stainless steel, titanium, PTFE, or Tefzel® tubing.
- Less oxygen permeable and more temperature resistant (to 100 °C) than PTFE or Tefzel® tubing.
- Use with PEEK finger-tight or flangeless fittings.
- Use tubing ≤ 0.007" to 7,000 psi; tubing ≥ 0.010" ID to 5,000 psi.

| Description | OD | ID | Length | Color Code | qty. | cat.# |
|-------------|-------|---------|--------|------------------|-------|-------|
| PEEK Tubing | 1/16" | 0.0025" | 1 m | pink dash stripe | 3-pk. | 25320 |
| PEEK Tubing | 1/16" | 0.005" | 3 m | red stripe | ea. | 25065 |
| PEEK Tubing | 1/16" | 0.007" | 3 m | yellow stripe | ea. | 25066 |
| PEEK Tubing | 1/16" | 0.010" | 3 m | blue stripe | ea. | 25067 |
| PEEK Tubing | 1/16" | 0.020" | 3 m | orange stripe | ea. | 25068 |



Clean-Cut Tubing Cutter

- Burr-free, perpendicular cuts that will not distort the tubing OD or close the ID.
- Use on PEEK, PTFE, Tefzel®, and other polymeric tubing.



25069

| Description | qty. | cat.# |
|--|------|-------|
| Clean-Cut Tubing Cutter | ea. | 25069 |
| Replacement Blade for Clean-Cut Cutter | ea. | 25070 |

Tubing Clip

Securely holds 1/16" or 1/8" tubing in beaker, flask, or bottle up to 4 mm thick.



25310

| Description | qty. | cat.# |
|-------------|-------|-------|
| Tubing Clip | 5-pk. | 25310 |



25308



25309

PEEK Tubing Elbows

Tubing elbows (90° and 180°) are ideal for routing 1/16" PEEK tubing through your system. Simply snap the tubing into the elbow. Prevent pinching of PEEK tubing, which can cause high pressure.

| Description | qty. | cat.# |
|-------------------------|-------|-------|
| PEEK Tubing Elbow, 90° | 5-pk. | 25308 |
| PEEK Tubing Elbow, 180° | 5-pk. | 25309 |



25336



25328

QuickSplit Post-Column Flow Splitters

Fluid resistor technology eliminates adjustments to capillary tubing for optimizing split ratio. Wide range of interchangeable resistors available.

Fixed Flow Splitters for HPLC & LC-MS

- Split ratio not affected by changes in viscosity or pressure.
- High operating pressure limit: 10,000 psi (68,948 kPa).
- Low dead volume—negligible effect on analyte bandwidth.
- Total flow: 0.1–5.0 mL/min.

Adjustable Flow Splitter

- Adjustable metering valve gives convenient control of split ratio.
- Split ratio not affected by changes in viscosity or pressure.
- High operating pressure limit: 5,000 psi (34,474 kPa).
- Low dead volume—negligible effect on analyte bandwidth.
- Total flow: 0.1–5.0 mL/min.

| Description | Split Ratio | qty. | cat. # |
|---|----------------|------|--------|
| Binary Fixed, Post Column | 100:1 | ea. | 25326 |
| | 50:1 | ea. | 25327 |
| | 20:1 | ea. | 25328 |
| | 10:1 | ea. | 25329 |
| | 5:1 | ea. | 25330 |
| Replacement Fixed Resistor Set, Post Column | 100:1 | ea. | 25331 |
| | 50:1 | ea. | 25332 |
| | 20:1 | ea. | 25333 |
| | 10:1 | ea. | 25334 |
| | 5:1 | ea. | 25335 |
| Adjustable, Post Column | 5:1 to 100:1 | ea. | 25336 |
| | 1:1 to 20:1 | ea. | 25337 |
| | 50:1 to 1000:1 | ea. | 26416 |
| Replacement Adjustable Resistor Set, Post Column* | 5:1 to 100:1 | ea. | 25338 |
| | 1:1 to 20:1 | ea. | 25339 |

*QuickSplit post-column flow splitter serial number required for replacement resistor set to ensure compatibility. Every resistor is manufactured per serial number. The serial number is located on top of the splitter.



LCLocker LC Organizer



Deluxe BenchBooster Organizer



Mini pHPerch Storage Unit



LC 30-Column Storage Cabinet



Book Holders



Open Supply Bins, 13-bin unit



TopLoader Balance-Bank Storage Unit



Glove Box Dispensers

LC Organizers

| Description | Dimensions | qty. | cat. # |
|-------------------------------|-------------------------------|------|--------|
| LCLocker | 24 x 12 x 6" | ea. | 25149 |
| BenchBooster | 24 x 7 x 12" | ea. | 25150 |
| Mini pHPerch | 13 x 12 x 6" | ea. | 25147 |
| TopLoader | 12 x 12 x 7" | ea. | 25148 |
| 30 Column Cabinet | 17 x 15 x 3" | ea. | 25159 |
| Book Holder, 0.75" ID (Small) | 4 1/2 x 6 x 1 1/4" | ea. | 25151 |
| Book Holder, 1.5" ID (Large) | 4 1/2 x 6 x 1 3/4" | ea. | 25152 |
| Open Supply Bin | 24 x 12 x 10" (4-Bin Unit) | ea. | 25153 |
| Open Supply Bin | 12 x 16 x 10.5" (5-Bin Unit) | ea. | 25154 |
| Open Supply Bin | 12 x 12 x 7.5" (13-Bin Unit) | ea. | 25155 |
| Glove Box Dispenser | 5 1/8 x 11 x 4 1/4" (Single) | ea. | 25156 |
| Glove Box Dispenser | 10 1/8 x 11 x 4 1/4" (Double) | ea. | 25157 |
| Glove Box Dispenser | 15 1/8 x 11 x 4 1/4" (Triple) | ea. | 25158 |

*Please note: Accessories and supplies in photographs are not included.



Easily
remove
broken
fittings.

PEEK Fitting Extractor

Drill into the broken fitting, then screw the extractor into the fitting and remove it easily. Eliminates the need for heat or other techniques that could damage your column.



| Description | qty. | cat.# |
|------------------------|------|-------|
| PEEK Fitting Extractor | ea. | 25325 |



ValvTool Wrench

The ValvTool is a time-saving device that provides easy access to many hard-to-reach Rheodyne® or Valco® valves. For 1/4" nuts.

| Description | qty. | cat.# |
|-----------------|------|-------|
| ValvTool Wrench | ea. | 25321 |

Use the flat
side of the
piston seal
insertion
tool to seat a
Waters face
seal.



LC Piston Seal Insertion Tool

Simplify pump maintenance: use one end to remove your old seal, then simply slip your new seal on the other end and push it flush into position. The tool cannot mar the surrounding metal surface of the pump housing.



Remove a seal



Seat a seal



| Description | qty. | cat.# |
|-------------------------------|------|-------|
| LC Piston Seal Insertion Tool | ea. | 21356 |

Raptor™

LC Columns



Experience
Selectivity Accelerated

See pages 155–159 or visit www.restek.com/raptor

Raptor™ EXP® Guard Columns also available.



Hub-Cap 4-Liter Bottle Tops

Hub-Cap bottle tops are a great way to neatly keep your mobile phase lines where they belong. Use them instead of plastic paraffin film, aluminum foil, or tape on your mobile phase reservoirs.



| Description | qty. | cat.# |
|---|-------|-------|
| Hub-Cap (assembly of the bottle cap and plug) | kit | 26541 |
| Hub-Cap Multi-Pack | 3-pk. | 26542 |

Hub-Cap Adaptors

Allow the use of the Opti-Cap® Top with 4-liter solvent bottles.

| Description | qty. | cat.# |
|--|-------|-------|
| Hub-Cap Adaptor (allows use of the Opti-Cap w/4 L solvent bottles) | ea. | 26538 |
| Hub-Cap Adaptor Multi-Pack | 3-pk. | 26539 |
| Hub-Cap Adaptor and Opti-Cap (for use w/GL-45 solvent bottles) | kit | 26540 |

Related Items and Replacement Parts for Hub-Cap 4-Liter Bottle Tops

| Description | qty. | cat.# |
|---|-------|-------|
| Mobile Phase Spurge Filter, 2 µm | ea. | 25311 |
| Mobile Phase Spurge Filter, 10 µm | ea. | 25312 |
| PTFE Tubing, 1/8" OD x 0.094" (2.4 mm) ID x 3 m | 3 m | 25307 |
| PTFE Tubing, 1/8" OD x 0.063" (1.6 mm) ID x 3 m | 3 m | 25306 |
| PEEK Plug, 1/4"-28 threads | 3-pk. | 25319 |

Opti-Cap® GL-45 Bottle Tops

The most economical way to helium-spurge and deliver LC mobile phases. Opti-Cap® tops fit all standard GL-45 bottles and have two 1/8" holes and one 1/16" hole for tubing. All three openings are designed for threaded PEEK plugs.



| Description | qty. | cat.# |
|------------------------------|------|-------|
| Opti-Cap (Cap and PEEK Plug) | ea. | 25300 |
| Opti-Cap Kit | kit | 25301 |
| Opti-Cap Kit with 1 L Bottle | kit | 25302 |
| Opti-Cap Kit with 2 L Bottle | kit | 25303 |

Opti-Cap® Adaptors

Allow the use of the Hub-Cap Top with GL-45 solvent bottles.

| Description | qty. | cat.# |
|--|-------|-------|
| Opti-Cap Adaptor (allows use of Hub-Cap w/GL-45 solvent bottles) | ea. | 27197 |
| Opti-Cap Adaptor Multi-Pack | 3-pk. | 27198 |
| Opti-Cap Adaptor w/Hub-Cap | kit | 26551 |



Related Items and Replacement Parts for Opti-Cap® GL-45 Bottle Tops

| Description | qty. | cat.# |
|--|-------|-------|
| Mobile Phase Spurge Filter, 2 µm | ea. | 25311 |
| Mobile Phase Spurge Filter, 10 µm | ea. | 25312 |
| PTFE Tubing, 1/8" OD x 0.094" (2.4 mm) ID x 3 m | 3 m | 25307 |
| PTFE Tubing, 1/8" OD x 0.063" (1.6 mm) ID x 3 m | 3 m | 25306 |
| PEEK Plug, 1/4"-28 threads | 3-pk. | 25319 |
| 1 L Graduated Safety-Coated Bottle – GL-45 threads | ea. | 25304 |
| 2 L Graduated Safety-Coated Bottle – GL-45 threads | ea. | 25305 |

Which Bottle Top Do I Need?

I have a 4-Liter bottle...

Option 1: Hub-Cap Top (cat.# 26541)

or

Option 2*: Opti-Cap® Top (cat.# 25300)
plus Hub-Cap Adaptor (cat.# 26538)

*Also available as a kit (cat.# 26540)

Option 1



Option 2*



*Also available as a kit
(cat.# 26540)

I have a GL-45 bottle...

Option 1: Opti-Cap® Top (cat.# 25300)

or

Option 2*: Hub-Cap Top (cat.# 26541)
plus Opti-Cap® Adaptor (cat.# 27197)

*Also available as a kit (cat.# 26551)

Option 1



Option 2*



*Also available as a kit
(cat.# 26551)



Bottle not included.

Waste Overflow Indicator for LC Systems

- Avoid messy pooling around mobile phase waste containers.
- Audible alarm instantly alerts user, preventing overflow.
- Compact, battery-operated unit.
- Available for 4-liter and GL-45 solvent bottles.

The Restek® waste overflow indicator will help keep your mobile phase waste where it belongs—in the waste container! Compact, battery-operated unit fits securely on solvent bottles and accommodates two waste streams. An audible alarm is given as the solvent waste container approaches capacity, giving you time to empty or change the container. Another innovative design from Restek!

| Description | qty. | cat.# |
|---|-------|-------|
| Waste Overflow Indicator for LC Systems, 4 Liter | ea. | 26543 |
| Waste Overflow Indicator for LC Systems, GL-45 | ea. | 26550 |
| Replacement AA Battery for the Waste Overflow Indicator | ea. | 26544 |
| Replacement AA Batteries for the Waste Overflow Indicator | 3-pk. | 26545 |

Extend the life of columns and pump seals with Restek's Bluestem glass solvent filter

See **page 343**.



tech tip

Mobile Phase Additives with LC-MS

Mobile phase additives such as triethylamine, trifluoroacetic acid, and ion-pairing reagents can compete with sample ions, decreasing sensitivity and, in some cases, reducing sample ion intake into the MS. To obtain symmetric peaks and/or sufficient retention, use base deactivated silica, like Pinnacle® DB or high purity silicas like Ultra or Raptor™, that minimize the need for additives.



26395



Polypropylene
Membrane Filters



25925

Hub-Cap Filter Kit

Kit includes: bottle adaptor, bottle adaptor nut, filter inlet cap, grid support, vacuum hose barb, tube compression fitting, 47 mm grid, 47 mm 0.22 µm filter membrane, 47 mm 0.45 µm filter membrane, 1/4" OD x 1/8" ID ultra chemical resistant, FEP-lined Tygon® tubing (3'), 6" x 6" box with shrink-wrap insert.

Includes universal threads designed for 4 L or Wheaton bottles. Use with GL-45 bottles requires Opti-Cap® adaptor (sold separately).



Bottle not included.

Assembles quickly and easily!



Unscrew and lift off top.



Place membrane filter on top of grid.



Reattach top.



Connect vacuum line to side port.

| Description | qty. | cat.# |
|--|---------|-------|
| Hub-Cap Filter Kit for 4 L or Wheaton bottles | kit | 26395 |
| Replacement Parts | | cat.# |
| Polypropylene Membrane Filters, 47 mm, 0.45 µm | 100-pk. | 26396 |
| Polypropylene Membrane Filters, 47 mm, 0.22 µm | 100-pk. | 26397 |
| Nylon Membrane Filters, 47 mm, 0.45 µm | 100-pk. | 26398 |
| Nylon Membrane Filters, 47 mm, 0.22 µm | 100-pk. | 26399 |
| Hub-Cap Filter Hose Barb | ea. | 25925 |

Last Drop Filter

The flat filter element sits parallel to the bottom of the mobile phase reservoir, allowing the filter to draw 98% of the mobile phase without drawing air into the system. Conventional cylindrical mobile phase filters begin to draw air into the system when approximately 10% of the solvent remains in the reservoir. The Last Drop filter allows more analyses per batch of mobile phase and helps reduce hazardous waste. 22.1 mm OD.



25314

| Description | qty. | cat.# |
|-------------------------|------|-------|
| Last Drop Filter, 2 µm | ea. | 25314 |
| Last Drop Filter, 10 µm | ea. | 25315 |

UHP Pulse Dampener

UHPLC compatible

The UHP pulse dampener provides minimal flow pulsation at system pressures up to 18,000 psi. Its low dead volume (220 µL at atmospheric pressure) reduces overall system volume for UHP applications. The UHP pulse dampener has a stainless steel fluid path.



26549

Specifications:

| | |
|----------------------|---|
| Operating Pressure: | 0–18,000 psi |
| Pulsation Dampening: | 3:1 reduction in pulsation (dependent on pump characteristics and system volume and pressure) |
| Fluid Path Volume: | 220 µL (atmospheric pressure) +44 µL (per 1,000 psi system pressure) |
| Wetted Materials: | 316 SS; PTFE |
| Dimensions: | 2.5" diameter x 2.0" high |

| Description | qty. | cat.# |
|--------------------|------|-------|
| UHP Pulse Dampener | ea. | 26549 |

Low-Pressure Slip-On Inlet Filter for Mobile Phase Reservoir

A 316 stainless steel tip with a Tefzel® collar seals to a corrosion-resistant 316 stainless steel filter element. The slip-on filter easily attaches to the pump inlet line, without the use of wrenches. The universal 1/8" OD tip accommodates standard PTFE tubing inner diameters. The cylindrical filter is standard 10 µm porosity. Fits Altex, ISCO, LDC, Varian, Waters, PerkinElmer, and other pumps.



25008

| Description | qty. | cat.# |
|----------------------|------|-------|
| Slip-On Inlet Filter | ea. | 25008 |

MiniPulse Pulse Dampener

- Compact unit (2.5" x 1.5") can be placed almost anywhere.
- Small, 160 µL dead volume at atmospheric pressure.
- PEEK unit can withstand pressures to 5,000 psi (34,474 kPa).
- 316 stainless steel unit can withstand pressures to 6,000 psi (41,369 kPa).



25238

Improve system baseline stability while increasing the total system volume by only 160 µL. The MiniPulse pulse dampener is ideal for applications where minimizing the total system volume is critical. Stainless steel and PEEK options for a wide range of applications.

| Description | qty. | cat.# |
|---|------|-------|
| MiniPulse Pulse Dampener, Stainless Steel | ea. | 25238 |
| MiniPulse Pulse Dampener, PEEK | ea. | 25239 |

Mobile Phase Spurge Filters

The spurge filter is an inexpensive way to prepare and maintain mobile phases free of dissolved gas. Filters are made from 316 stainless steel and PEEK, and they are compatible with most solvents. Connects to standard 1/8" OD (3.2 mm) PTFE tubing.



25311

| Description | qty. | cat.# |
|-----------------------------------|------|-------|
| Mobile Phase Spurge Filter, 2 µm | ea. | 25311 |
| Mobile Phase Spurge Filter, 10 µm | ea. | 25312 |
| Mobile Phase Spurge Filter, 20 µm | ea. | 25313 |

Solvent Debubbler

Bubbles in an LC system can cause check valve malfunctions and pump cavitation, seriously affecting pump performance. The debubbler removes bubbles from the fluid stream before it enters the pump.



25014

Special geometry at the base of the housing allows bubbles entrained in the inlet fluid stream to rise and be trapped in the reservoir. The gas/liquid interface is easily visible through the translucent wall of the device. Loosening the airtight cap releases the trapped gas. The debubbler features a polypropylene body and bracket; universal inlet and outlet connecting tips are made of 316 stainless steel and accept 0.063", 0.085", and 0.125" ID tubing.

| Description | qty. | cat.# |
|--------------------------------|------|-------|
| Solvent Debubbler With Bracket | ea. | 25014 |



Bluestem Glass Solvent Filter

- Restek® Bluestem glass solvent filter provides clean mobile phase to extend the life of columns and pump seals.
- 15 µm borosilicate glass frit sits lower than conventional glass filters to draw more mobile phase from each bottle.
- Blue filter stem allows instant visual confirmation of upright filter orientation.
- Connects to standard 1/8" OD (3.2 mm) PTFE tubing using your existing frit adaptor (also sold separately as cat.# 26392).

Prevent the particulates and microbial growth in your LC solvents from entering your instrument with the new Restek® Bluestem glass solvent filter.

| Description | Similar to Agilent Part # | qty. | cat.# |
|----------------------------------|---------------------------|-------|-------|
| Glass Solvent Filter, 15 µm frit | 5041-2168 | ea. | 26431 |
| Frit Adaptor, PTFE | 5062-8517 | 4-pk. | 26392 |

Mixers

- Reduced baseline noise.
- Increased sensitivity.
- Improved gradient accuracy for more reproducible results.
- Increased reaction efficiency in post-column derivatization.

An efficient cross-flow shearing mechanism and interchangeable cartridges produce vortex shear mixing over a wide range of flows.

HyperShear Static In-Line Mixers

Stainless steel or PEEK.



| Volume | Stainless Steel | | PEEK | |
|--------|-----------------|-------|------|-------|
| | qty. | cat.# | qty. | cat.# |
| 1 µL | ea. | 26409 | ea. | 26410 |
| 25 µL | ea. | 26411 | ea. | 26412 |
| 50 µL | ea. | 25341 | ea. | 26413 |
| 150 µL | ea. | 25342 | ea. | 26414 |
| 250 µL | ea. | 25343 | ea. | 26415 |



Ternary Tee Mixer

Stainless steel.

| Description | Volume | qty. | cat.# |
|-------------------|--------|------|-------|
| Ternary Tee Mixer | 25 µL | ea. | 25138 |



Polypropylene Membrane Filters

Membrane Microfiltration Glassware

This 47 mm filtration apparatus with fritted glass support is recommended for routine filtration of corrosive liquids and removal of particles from LC solvents.

The ground joint connection eliminates phthalate contamination that can occur when using silicone or neoprene stoppers. The support base has a coarse-porosity glass frit and an integral vacuum connection, located above the drip tip to prevent contamination of the vacuum line with filtrate droplets. Each apparatus includes a funnel, an anodized aluminum clamp, a 47 mm fritted glass support base, and a filtration flask.

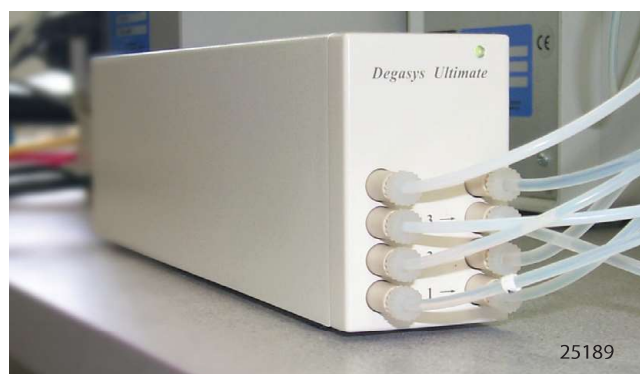


| All-Glass Microfiltration Apparatus | qty. | cat.# |
|---|---------|---------------|
| 300 mL Funnel, 1,000 mL Flask | ea. | KT953825-0000 |
| 500 mL Funnel, 2,000 mL Flask | ea. | KT953835-0000 |
| 1000 mL Funnel, 4,000 mL Flask | ea. | KT953845-0000 |
| Replacement Parts for Microfiltration Apparatus | qty. | cat.# |
| 40/35 PTFE Joint Sleeve | 6-pk. | KT676001-4035 |
| Flask Cap, 40/35 Outer Joint | ea. | KT953830-0000 |
| Fritted Glass Support, 47 mm, 40/35 Joint | ea. | KT953826-0000 |
| Glass Funnel, 47 mm, 100 mL | ea. | KT953761-0000 |
| Glass Funnel, 47 mm, 300 mL | ea. | KT953751-0000 |
| Glass Funnel, 47 mm, 500 mL | ea. | KT953771-0000 |
| Glass Funnel, 47 mm, 1,000 mL | ea. | KT953781-0000 |
| Flask, 1,000 mL, 40/35 Joint | ea. | KT953827-0000 |
| Flask, 2,000 mL, 40/35 Joint | ea. | KT953828-0000 |
| Flask, 4,000 mL, 40/35 Joint | ea. | KT953829-0000 |
| Aluminum Clamp, 47 mm | ea. | KT953753-0000 |
| Membrane Filters | qty. | cat.# |
| Polypropylene Membrane Filters, 47 mm, 0.45 µm | 100-pk. | 26396 |
| Polypropylene Membrane Filters, 47 mm, 0.22 µm | 100-pk. | 26397 |
| Nylon Membrane Filters, 47 mm, 0.45 µm | 100-pk. | 26398 |
| Nylon Membrane Filters, 47 mm, 0.22 µm | 100-pk. | 26399 |

Mobile Phase Degasser

Dissolved oxygen can cause flow rate instability and increased baseline noise. Also, it has a quenching effect on fluorescence detection and increases the background of UV detectors. Dissolved gases can out-gas in the LC system, forming bubbles in check valves, at connections, or in detector flow cells.

In-line vacuum degassing is more effective at removing dissolved gas from mobile phases than sonication or helium sparging. In-line degassers work by withdrawing gas across a gas-permeable membrane encased in a sealed chamber. Traditionally, the membrane has been made of PTFE tubing, but the Degasys Ultimate Degasser uses tubing composed of an amorphous fluoropolymer (AF) that is 200 to 300 times more gas permeable than PTFE. This translates into the ability to use shorter tubing for removing dissolved gas. This new material also has better tubular burst strength than PTFE. To prevent cross contamination, each channel on this Degasys unit is individually encased within its own vacuum chamber.



25189

Specifications:

| | |
|------------------------------|---------------------|
| Residual Oxygen ¹ | 0.9 ppm |
| Pressure Loss ¹ | 0.24 psi (1.65 kPa) |
| Internal Volume | 500 µL |

Wetted Parts AF, PTFE, ETFE, PPS

Max Flow Rate 7 mL/min/channel

¹ At a flow rate of 1 mL/min

To prevent system damage, do not use the Degasys system with solutions containing TFA at concentrations greater than 5%.

| Description | Voltage | qty. | cat.# |
|--|---------|------|-------|
| Mobile Phase Degasser (4 Channel, 7 mL/min/channel) | 110V | ea. | 25189 |
| Mobile Phase Degasser (4 Channel, 7 mL/min/channel) | 220V | ea. | 25194 |



26516

CE

26517

Sidewinder LC Column Heater

- Easy to set up!
- Operation range: 5 °C above ambient to 85 °C, ± 1 °C.
- Lightweight, compact design fits in small spaces.
- Column holder can be placed in any orientation.

This unique design completely encloses any LC analytical column up to 25 cm in length. Two lengths of heater jackets are available: the short column holder accommodates columns up to 10 cm in length, while the long column holder holds columns up to 25 cm in length. The control module provides optimum heating performance, accuracy to within 1 °C, and stability to within 0.1 °C. The new Sidewinder controller has fast 10 Hz sampling for improved responsiveness. The RS232 control allows external programming.

| Description | Length | qty. | cat.# |
|--|---------------|------|-------|
| Temperature Control Module and Column Holder | Long (25 cm) | ea. | 26516 |
| Temperature Control Module and Column Holder | Short (10 cm) | ea. | 26517 |



26518

CE

Sidewinder LC Heater/Cooler Temperature Control Module and Column Holder

- Operation range: 5–55 °C, ± 0.2 °C.
- Ability to program multiple temperature points.
- Accommodates columns up to 30 cm in length and 7.8 mm ID.
- Compact design.

The Sidewinder heater/cooler unit has a doubly insulated cover to maintain the programmed temperature to within 0.2 °C. The 24 V control unit provides maximum stability and rapid equilibration times. RS232 control allows external programming.

| Description | qty. | cat.# |
|---|------|-------|
| Sidewinder Heater/Cooler Temperature Control Module and Column Holder | ea. | 26518 |

All Sidewinder temperature control products carry the globally recognized CE mark. Each unit meets the demanding electromagnetic emission standards of the new European Union Directives, United States standards, and Canadian standards.

Power requirements: All Sidewinder heater and heater/cooler units utilize a 24 VDC input to energize the system. This voltage is generated from a universal power supply included with each Sidewinder unit. Also included with each Sidewinder unit is a power cable (also known as a mains cable) for use in the U.S. The power cable supplies current from a wall or bench receptacle to the provided universal 24 VDC universal power supply.

FOR USE OUTSIDE THE U.S. If the Sidewinder unit is intended for use outside the U.S., an appropriate power cable must be purchased separately (not available from Restek).

Parker Balston® Nitrogen Gas Generators for LC-MS

- Turn compressed air into ultra-pure nitrogen (up to 99.5%).
- Flows from 1 to 44 L/min.
- Models N2-04, N2-14, N2-22, and N2-35 require no electricity.
- Safe, reliable, low maintenance.
- Maintenance kits include replacement filters.



| Specifications | NitroFlow Lab | N2-04 | N2-14 | N2-22 or N2-22A | N2-35 or N2-35A |
|-----------------------------|--|--|---|---|---|
| Maximum Nitrogen Flow Rate: | 32 L/min | 8 L/min | 36 L/min | N2-22: 44 L/min N2-22A: 29 L/min | 44 L/min |
| Nitrogen Purity: | 99.50% | 99% | 95.0%–99.5% | 99% | 99% |
| Min/Max Inlet Pressure: | N/A | 60 psig/145 psig | 60 psig/145 psig | 60 psig/145 psig | 60 psig/145 psig |
| Electrical Requirements: | 120 VAC/60 Hz | None | None | N2-22: None N2-22A: 120 VAC/60 Hz | N2-35: None N2-35A: 120 VAC/60 Hz |
| Dimensions: | 27.6" h x 35.4" w x 12.2" d (70 cm x 90 cm x 31 cm) | 11" h x 13" w x 16" d (27 cm x 34 cm x 41 cm) | 50" h x 16" w x 16" d (127 cm x 41 cm x 41 cm) | 50" h x 16" w x 16" d (127 cm x 41 cm x 41 cm) | 50" h x 16" w x 16" d (127 cm x 41 cm x 41 cm) |
| Shipping Weight: | 205 lb (93 kg) | 43 lb (20 kg) | 75 lb (34 kg) | N2-22: 101 lb (46 kg) N2-22A: 106 lb (48 kg) | N2-35: 115 lb (52 kg) N2-35A: 119 lb (54 kg) |

| Nitrogen Generators for LC-MS | Model # | qty. | cat. # |
|---|--|------|--------|
| Nitrogen Generator for LC-MS | NitroFlow Lab Model, 32 L/min max. flow | ea. | 22129 |
| Nitrogen Generator for LC-MS | N2-04 Model for ELSD, 8 L/min max. flow | ea. | 22130 |
| Nitrogen Generator for LC-MS | N2-14 (general purpose) 36 L/min max. flow | ea. | 20677 |
| Nitrogen Generator for LC-MS | N2-22 Model, 44 L/min max. flow | ea. | 22131 |
| Nitrogen Generator for LC-MS | N2-22A Model, 29 L/min max. flow | ea. | 22132 |
| Nitrogen Generator for LC-MS | N2-35 Model, 44 L/min max. flow | ea. | 22133 |
| Nitrogen Generator for LC-MS Includes: Oxygen analyzer and audible alarm (monitors oxygen in nitrogen stream and signals high or low concentrations) | N2-35A Model, 44 L/min max. flow | ea. | 22134 |
| Maintenance Kits | Model # | qty. | cat. # |
| Maintenance Kit Includes: carbon filter | for NitroFlow Lab | kit | 22156 |
| 6-Month Maintenance Kit* Includes: 1st stage prefilter, 2nd stage prefilter, and final filter (1 each) | for N2-14, N2-14A, 75-72, 75-720NA | kit | 21648 |
| 6-Month Maintenance Kit With Carbon Filter* Includes: 1st stage prefilter, 2nd stage prefilter, hydrocarbon scrubber, and final filter (1 each) | for N2-14, N2-14A, 75-72, 75-720NA | kit | 22135 |
| Generator Maintenance Kit Includes: 1st and 2nd stage prefilters (1 each) and 1 final filter | for HPZA-3500, HPZA-7000, HPZA-18000, HPZA-30000, and 75-80 (Zero Air); N2-04 (Nitrogen); and TOC-1250 (TOC) | kit | 21647 |

*The manufacturer recommends maintenance for this unit every 6 months.

International power cords are available. Contact Customer Service or your Restek® representative to order.



Need to clean up your nitrogen stream for LC-MS?

Check out our Restek® Super Clean® gas trapping system.

See **page 288**.

www.restek.com/gas





Valves for HPLC

Our valves have low internal volumes and are rated to 15,000 psi (103,421 kPa). They feature a two-piece stem assembly in which the rotating upper shank is coupled through a ball joint to a static lower stem. Only finger-tight torque is required to make the seal.

| Description | qty. | cat.# |
|---|------|-------|
| Through Valve for HPLC, 1/16" Fittings, 1/4-28, Stainless Steel, Includes Nuts and Ferrules | ea. | 26400 |
| Angle Valve for HPLC, 1/16" Fittings, 1/4-28, Stainless Steel, Includes Nuts and Ferrules | ea. | 26401 |
| Bottom Vent Valve for HPLC, 1/16" Fittings, 1/4-28, Stainless Steel, Includes Nuts and Ferrules | ea. | 26402 |
| Side Vent Valve for HPLC, 1/16" Fittings, 1/4-28, Stainless Steel, Includes Nuts and Ferrules | ea. | 26403 |
| Dual-Stem Three-Way Valve for HPLC, 1/16" Fittings, 1/4-28, Stainless Steel, Includes Nuts and Ferrules | ea. | 26404 |
| Prime/Purge Valve for HPLC, 1/4-28 Flanged Seat, Stainless Steel, with Tubing and Fittings | ea. | 26406 |
| Prime/Purge Valve Repair Kit for Prime/Purge Valve (includes: soft seal (2), PTFE O-ring (2), 7/32 hex key) | kit | 26407 |

Backpressure Regulators

Backpressure regulators can improve detector performance by preventing bubble formation in the detector flow cell. They also are useful in post-column reaction lines and between detectors and fraction collectors in preparatory work. Regulators are superior to more specific alternative solutions, like small-bore tubing, in which pressure varies with flow rate.

Our end-of-line and flow-through backpressure regulators are adjustable to ensure constant backpressure over a wide range of mobile phase viscosities and flow rates. The end-of-line model is available with 1/4-28 plastic flange-type fittings or high-pressure 1/16" compression fittings; this design adjusts from 15 to 60 psi (103 to 414 kPa). The flow-through design has 1/16" compression fittings and is adjustable from 7 to 75 psi (48 to 517 kPa).

| Description | qty. | cat.# |
|---|------|-------|
| Backpressure Regulator: end-of-line, 1/16" OD tubing, flanged | ea. | 25017 |
| Backpressure Regulator: end-of-line, high-pressure seat | ea. | 25018 |
| Backpressure Regulator: flow-through, 5 µL internal volume | ea. | 25020 |

also available

Dampeners.
See [page 342](#).



Restek® Pack in a Box Kit

Restek's Pack in a Box kit is a complete column-packing system. Everything you need to pack your own analytical HPLC columns is included: pump, 20 mL reservoir, column hardware (150 x 4.6 mm, 316 stainless steel tubing with end-fittings, frits, nuts, and ferrules for two complete, empty columns), and system control software (computer not included). Detailed packing instructions and a DVD are also included. The packing pump is electric, so no pressurized air is required. AC input requirement: 85–265 VAC. 10,000 psi maximum pressure.



| Description | qty. | cat.# |
|-------------------|------|-------|
| Pack in a Box Kit | kit | 26408 |

Bio-Safe Column System (PEEK)

- Completely biocompatible.
- 100% metal free.
- Stable to 8,000 psi.

Bio-Safe columns are biocompatible and precision-machined from virgin PEEK (polyetheretherketone), a strong, inert polymer material.

Product Specs

- 4.6 mm ID x 30 mm length column with end fittings.
- 2.0 µm frits.

| Description | qty. | cat.# |
|--|------|-------|
| Bio-Safe Column System, PEEK, 4.6 mm x 30 mm, 2.0 µm | ea. | 26546 |



HPLC Column Tubing

Restek® tubing is manufactured from fine, chromatographic-grade 316 stainless steel. It is corrosion resistant, ultrasonically cleaned, and passivated. We polish the tubing and promise a burr-free cut. You can use this tubing immediately—there is no need for additional treatment.



| Length | 2.1 mm ID cat.# | 3.2 mm ID cat.# | 4.6 mm ID cat.# |
|-----------------------|-----------------|-----------------|-----------------|
| 1/4" OD Tubing | | | |
| 30 mm | 25100 | 25106 | 25112 |
| 50 mm | 25101 | 25107 | 25113 |
| 100 mm | 25102 | 25108 | 25114 |
| 150 mm | 25103 | 25109 | 25115 |
| 200 mm | 25104 | 25110 | 25116 |
| 250 mm | 25105 | 25111 | 25117 |

Empty Chromatography Columns

- 316 stainless steel tubing complete with end-fittings, frits, nuts, and ferrules.
- Preassembled prior to shipment, unless otherwise requested.
- Internal 1/16" seats are compatible with Valco® and Parker fittings.



| Length | 2.1 mm ID cat.# | 3.2 mm ID cat.# | 4.6 mm ID cat.# |
|-----------------------|-----------------|-----------------|-----------------|
| 1/4" OD Tubing | | | |
| 30 mm | 25118 | 25124 | 25130 |
| 50 mm | 25119 | 25125 | 25131 |
| 100 mm | 25120 | 25126 | 25132 |
| 150 mm | 25121 | 25127 | 25133 |
| 200 mm | 25122 | 25128 | 25134 |
| 250 mm | 25123 | 25129 | 25135 |

Column End-Fittings

- Fittings with distribution cone are intended for use on 3.0–4.6 mm ID HPLC columns.
- Fittings with flat bottom are intended for use on 1.0–3.0 mm ID HPLC columns.



These 1/4" compression end-fittings are compatible with 1/16" connecting tubing using Valco® and Parker fittings.

| Description | qty. | cat.# |
|---|------|-------|
| Column End-Fitting with Distribution Cone | ea. | 25077 |
| Column End-Fitting with Flat Bottom | ea. | 25078 |

1/4" HPLC Frits

We manufacture our frits from fine, chromatographic-grade 316 stainless steel, and we offer sizes to fit most column and pore sizes. To choose the correct frit, check its pore size compatibility with the particle size of the packing in the column. If the packing has a smaller particle size than the pore size of the frit, the packing can clog the frit.



| Packing particle size: | Use this pore size: |
|------------------------|---------------------|
| 3–4 µm: | 0.5 µm |
| 5–20 µm: | 2.0 µm |

| ID | Pore Size | qty. | cat.# |
|--------|-----------|--------|-------|
| 4.6 mm | 2.0 µm | 10-pk. | 25071 |
| 4.6 mm | 0.5 µm | 10-pk. | 25072 |
| 3.2 mm | 2.0 µm | 10-pk. | 25073 |
| 3.2 mm | 0.5 µm | 10-pk. | 25074 |
| 2.1 mm | 2.0 µm | 10-pk. | 25075 |
| 2.1 mm | 0.5 µm | 10-pk. | 25076 |



22292

Syringe for Hitachi LC Autosamplers

SGE

| Volume | SGE Model | cat.# | qty. | Restek cat.# |
|-----------------------|--------------|--------|------|--------------|
| 500 µL, M10 X1 Thread | 500C-HITACH1 | 007660 | ea. | 22292 |



22297

Syringes for PerkinElmer LC Autosamplers

SGE

| Volume | SGE Model | cat.# | qty. | Restek cat.# |
|---------------------------|------------|--------|------|--------------|
| 250 µL, 1/4-28 UNF Thread | 250D-CX-GT | 006995 | ea. | 22297 |
| 500 µL, 1/4-28 UNF Thread | 500D-CX-GT | 007995 | ea. | 22298 |

Syringe for Waters WISP LC Autosamplers

PTFE-tipped plungers

Hamilton

| Volume | Hamilton Model | cat.# | qty. | Restek cat.# |
|---------------------------|----------------|-------|------|--------------|
| 250 µL, 1/4-28 UNF Thread | 1725 | 80024 | ea. | 24529 |



22294

SGE

| Volume | SGE Model | cat.# | qty. | Restek cat.# |
|---------------------------|-----------|--------|------|--------------|
| 250 µL, 1/4-28 UNF Thread | 250D-WISP | 006690 | ea. | 22294 |

Syringes for CTC LC Autosamplers

Hamilton



22746

| Volume | Needle Term. | Needle Gauge | Needle Length | Point Style | Hamilton Model | cat.# | qty. | Restek cat.# |
|--------|--------------|--------------|---------------|-------------|------------------|--------|------|--------------|
| 10 µL | N | 22s | 2"/51 mm | 3 | 701N | 203073 | ea. | 22743 |
| 25 µL | N | 22s | 2"/51 mm | 3 | 1702N | 203075 | ea. | 22744 |
| 100 µL | N | 22s | 2"/51 mm | 3 | 1710N Slim Line* | 203077 | ea. | 22745 |
| 100 µL | N | 22 | 2"/51 mm | 3 | 1710N | 203235 | ea. | 22746 |
| 250 µL | N | 22 | 2"/51 mm | 3 | 1725N | 203079 | ea. | 22747 |
| 500 µL | N | 22 | 2"/51 mm | 3 | 1750N | 203349 | ea. | 22748 |

*Barrel OD = 6.7 mm; all other 25 µL and 100 µL syringes have a 7.9 mm barrel OD.



22737

SGE

| Volume | Needle Term. | Needle Gauge | Needle Length | Point Style | SGE Model | cat.# | qty. | Restek cat.# |
|---------|--------------|--------------|---------------|-------------|----------------------|--------|------|--------------|
| 10 µL | F | 22s | 2"/51 mm | LC | 10F-CTC-LC | 002710 | ea. | 22737 |
| 100 µL* | R | 22s | 2"/51 mm | LC | 100R-C/T-GT-LC | 005330 | ea. | 22741 |
| 500 µL* | F | 22s | 2"/51 mm | LC | 500F-CTC-GT-LC(0.41) | 007720 | ea. | 22742 |

*Gas-tight syringe.

Guide to Needle Termination Codes

Hamilton:

(N) Cemented Needle

SGE:

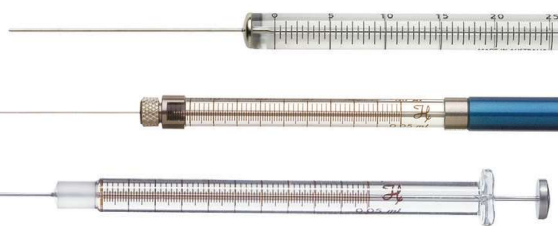
(F) Fixed Needle

(R) Removable Needle

also available

More syringes!

See page 394.



Well Plates

- Polypropylene plates with round-bottom wells reduce liquid retention; conical bottom provides optimal recovery of reagents.
- Nunc® shared wall technology allows increased well volume for optimum storage capacity and improved mixing.
- Round well shape is ideal for applications that require vortexing.
- Ideal for sample collection, storage, sampling, and combinatorial chemistry and library applications.
- Fits most autosampler compartments.
- All microplates manufactured by Nunc® meet the recommendation of American National Standards Institute (ANSI) (ANSI/SBS 1-2004).

| Description | Well Shape | Well Bottom | qty. | cat.# |
|------------------------|------------|-------------|-------------|-------|
| 0.45 mL 96-Well Plates | round | conical | 20-pk. | 26497 |
| 0.45 mL 96-Well Plates | round | conical | case of 120 | 26496 |
| 1.3 mL 96-Well Plates | round | round | 5-pk. | 26495 |
| 1.3 mL 96-Well Plates | round | round | case of 50 | 26494 |
| 2.0 mL 96-Well Plates | round | round | 5-pk. | 26493 |
| 2.0 mL 96-Well Plates | round | round | case of 60 | 26492 |

Universal Sealing Mats

- Protect contents and prevent carryover with pre-slit cap mats.
- Chemically resistant, silicone mats are excellent for compound storage to -80 °C.
- Pre-slit mats pierceable by autosampler needle, pipette tip, or probe.
- Universal mat for sealing 0.45, 1.3, and 2.0 mL plates.

| Description | qty. | cat.# |
|-----------------------|------------|-------|
| Universal Sealing Mat | 10-pk. | 26499 |
| Universal Sealing Mat | case of 50 | 26498 |



26496



26494



26492



26498

Thomson SINGLE StEP® Filter Vials

Sample filtration that's economical, eco-friendly, and fast!



- Easy-to-use vials offer fast sample filtration and require only a squeeze of your fingers.
- Color-coded caps allow easy identification of 0.2 µm or 0.45 µm membranes in PVDF, PTFE, PES, or nylon.
- Pre-slit PTFE/silicone caps help eliminate broken autosampler needles and cored septa.
- Low dead volume units feature rugged polypropylene vial and insert with 450 µL loading capacity.
- Fit most standard 12x32 mm autosamplers, including UHPLC instruments.

See **page 410**.

www.restek.com/singlestep