

GC Products Replacement Parts and Supplies Catalog

Version 0604

O·Analytical 
A World of Solutions



How to Order

Purchase products listed in this catalog directly from OI Analytical or from authorized distributors in locations throughout the world. Please contact OI Analytical for the OI Analytical distributor or representative nearest you.

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O·Analytical 
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**Customer
Communications**

OI Analytical is proud to provide the highest quality instruments available, backed by a commitment to quality, service, and support.

(800) 653-1711

Message from the President

Dear Valued Customer:

We are pleased to publish our new product catalog. This catalog is filled with quality instrumentation, parts, and supplies for analytical laboratories. We hope you find this OI Analytical catalog easy to use, with distinct sections identifying parts and supplies and detailed drawings to help make ordering even easier. We update product information frequently. For complete and current information, be sure to visit the OI Analytical website at www.oico.com.

Providing world-class customer support and service is our main goal, and we are organized to do just that! We offer onsite visits by trained specialists to assist you in selecting the right product configuration for your needs. We also provide complete systems including product installation and startup. Our support continues after the sale with a rapid-response customer support center, application experts, and on-site repairs.

For over 30 years, we have been supplying high-quality, reliable, and easy-to-use products. We are dedicated to continuously improving all of our business resources. Some measure of our efforts include earning ISO 9001 certification of our quality system and CE certification, which guarantees that products with the CE mark are tested by independent experts to the most current electrical and mechanical standards.

Our goal is to be your supplier of choice. If you are not satisfied with our products or service...just call me!



William W. Botts
President/CEO

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GC Sample Introduction Replacement Parts and Supplies

How to order

OI Analytical makes ordering easier than ever. Order by mail, telephone, fax, or e-mail.*

Mail: OI Analytical
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- Your company's purchase order number or credit card number (Visa, MasterCard, AMEX).
- OI Analytical part number, description, and quantity of item(s) ordered.
- Tax exemption number (if applicable).

* International customers should contact the OI Analytical distributor in their area. For a list of distributors, visit our website at www.oico.com. If a distributor is not available, contact OI Analytical International Sales directly at (979) 690-1711 for distributor information.



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Eclipse Sample Concentrator Replacement Parts and Supplies

Assemblies–Eclipse

Product	Unit	PN
DC actuator assembly	each	321175
Fan assembly for Eclipse water management and trap	each	321014
Thermocouple I/O board service kit	each	321922
Main PIC board with fuses service kit	each	321921
Pressure regulator	each	306886
Pressure transducer assembly	each	320670
Purge gas flow controller	each	228015
Sparge cover assembly	each	321097
Sparge mount bracket	each	320600
Sparge mount cover assembly	each	321083
Sparge mount manifold, standard (not for Foam Buster option)	each	320581
Trap cover	each	320704
Trap transformer assembly	each	320590
Valve oven cover assembly	each	321586

Cables–Eclipse

Product	Unit	PN
“H” cable for Agilent 6890N/6850 for starting additional external device on same GC	each	300954
Ethernet cable (Eclipse to network)	each	321902
Ethernet twisted pair cable (Eclipse to PC)	each	321901
Handshake pigtail cable for Agilent 5890/4890	each	185868
Handshake pigtail cable for Agilent 5970 (RTE-A)	each	209882
Handshake pigtail cable for Agilent 5970/5972MS (Pascal)	each	209866
Handshake pigtail cable for Agilent 6890A/6890MS	each	252213
Handshake pigtail cable for Agilent 6890N/6890A/6890MS/6850	each	252213
Handshake cable for Eclipse to Model 4552	each	284935
Handshake pigtail cable for Shimadzu 17A	each	244483
Handshake pigtail cable for Thermo Finnigan Trace GC†	each	319822
Handshake pigtail cable for Varian 3400	each	188409
Handshake pigtail cable for Varian 3800/3900	each	300368
Handshake pigtail cable to spade lugs	each	285924
System interface cable for P&T	each	226530



Customer Communications

Have a question about our instruments or an application? Call us about onsite specific applications training and hands-on seminars. Call us at our toll-free technical support hotline (800) 336-1711.

†Must order Thermo Finnigan kit to interface to split/splitless injectors (PN 119245-0001).

Ferrules and Fittings–Eclipse

Product	Size	Unit	PN
Bulkhead fitting, stainless steel	1/16" female x 1/8 male out	each	199513
Cable clamp, p-clip, for transfer line strain relief	0.562	each	321169
Clip for holding stylus to unit		each	A303-0709-00
Cross fitting, Silcosteel	1/16"	each	321103S
Ferrule, oversized, TFE/glass-filled, for frosted-glass vessel	18 mm	10/pk	321743
Ferrule, standard, TFE/glass-filled	18 mm	10/pk	224352
Ferrule, TFE	6 mm tube	each	224337
Ferrule, Tefzel, flangeless	1/16"	5/pk	322248
Fitting adapter, brass/nickel	10-32 x 1/16" hose	each	202077
Nut, female, brass	1/8	each	128108
Nut, extended, stainless steel	1/16" male	each	217802
Nut, hex, stainless steel, for trap bulkhead	5/16-20	each	228981
Nut, hex, stainless steel, for water management fitting	7/16-20	each	225474
Nut, PEEK	1/16 x 1/4-28	each	322231
Nut, PEEK, with flangeless ferrule, Tefzel	1/16 x 1/4-28	5/pk	322247
Plug fitting, brass/nickel	10-32 O-ring	each	177502
Plug fitting, nickel plated		each	217711NI
Screw, Phillips oval head, stainless steel	4-40 x 1/4	each	179457
Screw, socket head cap, stainless steel	6-32 x 1/2	each	197830
Screw, socket head cap, stainless steel,	4-40 x 3/8	each	183319
Spring clip for drain tube		each	321579
Trap bulkhead fitting		each	320580
Union, male, brass	1/4-1/16	each	227223
Union, bulkhead, female, stainless steel	1/16	each	175829
Union, female, stainless steel	1/16 tube	each	187161

Ferrules and Fittings–Eclipse

Product	Size	Unit	PN
Washer, star, external, stainless steel, for trap bulkhead fitting	5/16	each	250084
Washer, star, external, stainless steel, for water management fitting	7/16	each	250092
Water management fitting		each	321596

Fuses–Eclipse

Product	Size	Unit	PN
Fuse holder cap		each	320978
Fuse, 0.80 A, Fast-Blo	5 x 20 mm	each	320995
Fuse, 1.25 A, Fast-Blo	5 x 20 mm	each	320994
Fuse, 1.6 A, Fast-Blo	5 x 20 mm	each	321749
Fuse, 2.50 A, Slo-Blo	5 x 20 mm	each	320996
Fuse, 5 A, Fast-Blo	5 x 20 mm	each	321672
Fuse, 6.3 A, Slo-Blo	5 x 20 mm	each	249177

Heaters and Thermocouples–Eclipse

Product	Unit	PN
Heater and thermocouple assembly for Foam Buster option (not voltage specific)	each	321484
Heater assembly for sparge mount, 115 V	each	320637
Heater assembly for sparge mount, 230 V	each	321150
Heater assembly for valve oven, 115 V	each	321003
Heater assembly for valve oven, 230 V	each	321149
Heater assembly for water management, 115 V	each	321015
Heater assembly for water management, 240 V	each	321454
Thermocouple assembly for sample heater option	each	321005
Thermocouple assembly for sparge mount	each	321025
Thermocouple assembly for valve oven	each	321006
Thermocouple assembly for water management	each	321004

Miscellaneous–Eclipse

Product	Unit	PN
Eclipse operator's manual and software	each	321604
Eclipse startup kit	each	321603
P&T detector standard kit	each	222919
Power cord, 125 V 10 A for North America	each	116038
Touchscreen stylus	each	321585
Heated transfer line, blank, 115 V, 48"	each	321145
Heated transfer line, blank, 115 V, 60"	each	321146
Heated transfer line, blank, 230 V, 48"	each	321147
Heated transfer line, blank, 230 V, 60"	each	321148

Modules–Eclipse

Product	Unit	PN
Eclipse electronics module with touchscreen (115 V)	each	321091
Eclipse electronics module with touchscreen (230 V)	each	321618
Eclipse electronics module without touchscreen (115 V)	each	321747
Eclipse electronics module without touchscreen (230 V)	each	321748
Eclipse pneumatics module (115 V)	each	321090
Eclipse pneumatics module (230 V)	each	321619

Spargers and Accessories–Eclipse

Product	Size	Unit	PN
Ferrule, oversized, TFE/glass-filled, for frosted glass vessel	18 mm	10/pk	321743
Ferrule, standard, TFE/glass-filled	18 mm	10/pk	224352
Ferrule, TFE	6 mm tube	each	224337
Frit sparger, swage inlet	5 mL, 18 mm neck O.D.	each	321478
Frit sparger, swage inlet	25 mL, 18 mm neck O.D.	each	321479
Frosted frit sparger, swage inlet	5 mL, 18 mm neck O.D.	each	321080
Frosted frit sparger, swage inlet	25 mL; 18 mm neck O.D.	each	321081
Frosted needle sparger	5 mL	each	321696
Frosted needle sparger	25 mL	each	321697
Sample needle for frit sparger		each	321035
Sample needle for frit sparging with Foam Buster option		each	321475
Sample needle for needle sparger		each	321651
Sample needle for needle sparger with Foam Buster option		each	321700
Sparger wrench	1 1/8" OE	each	227975

Support and Maintenance Kits–Eclipse

Product	Unit	PN
One-year parts and supplies kit for Eclipse	each	321037
Starter and support kit for Eclipse	each	228056
Interface kit, Eclipse to Model 4552	each	321728
Complete sample pathway refurbishing kit (not Foam Buster)	each	322230
Sample pathway preventive maintenance kit (not Foam Buster)	each	322233
Needle sparge hardware kit	each	321615

Traps–Eclipse

Product	Unit	PN
#0 Trap, blank (no sorbent)	each	228114
#7 Trap, Tenax only	each	227348
#8 Trap, Tenax/silica gel	each	227363
#9 Trap, Tenax/silica gel/charcoal	each	219972
#10 Trap, Tenax/silica gel/carbon molecular sieve	each	228122
#11 Trap, VOCARB® 3000	each	258830
#12 Trap, BTEX (Carbopack B/ Carbopack C)	each	258848

Tube Assemblies and Tubing–Eclipse

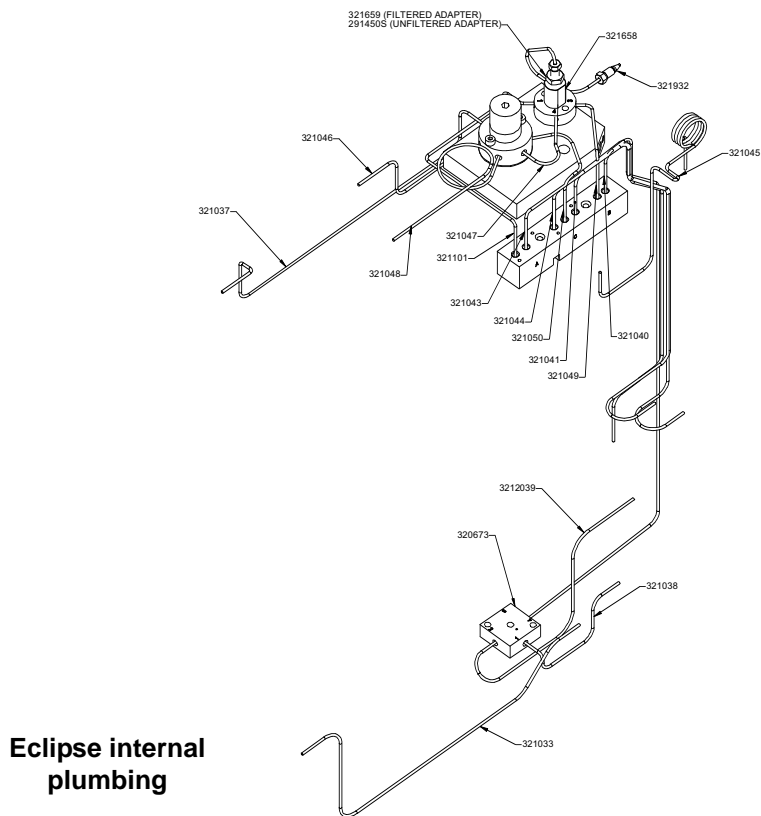
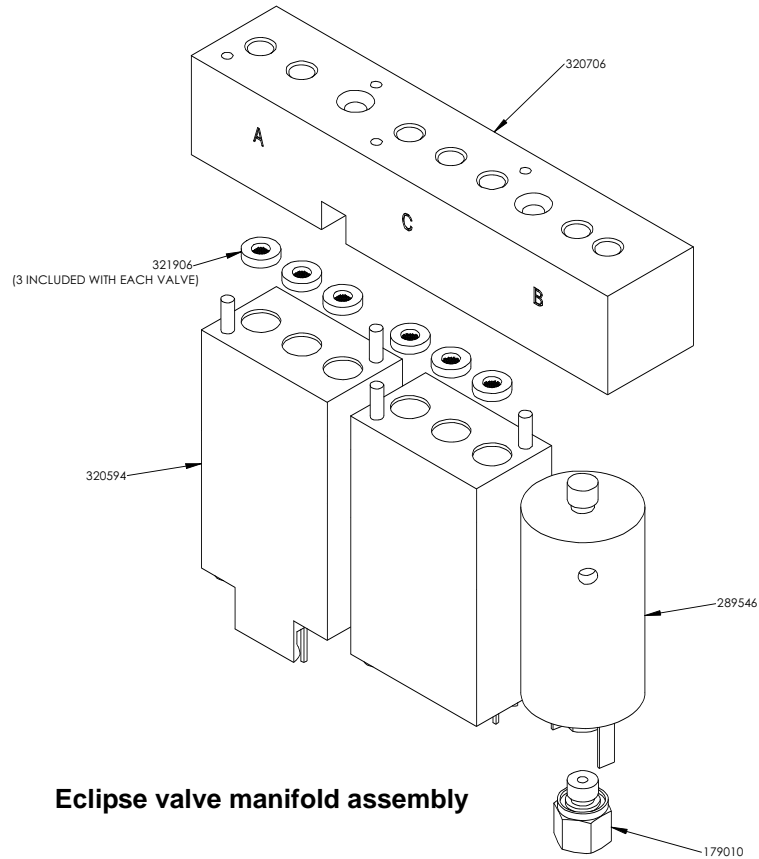
Product	Size	Unit	PN
Tube assembly for carrier in to six-port valve 4		each	321037
Tube assembly for Eclipse six-port valve 1 to cross 4		each	321047
Tube assembly for external drain		each	321476
Tube assembly for six-port valve 2 to water management fitting		each	321048
Tube assembly, cross 1 to valve A		each	321101
Tube assembly, sparge mount to filter		each	321932
Tube assembly, six-port valve 5 to trap bulkhead fitting		each	321046
Tube assembly, TFE, drain line		each	321691
Tube assembly, transfer line	4 feet	each	321692
Tube assembly, transfer line	5 feet	each	321693
Tube assembly, vent plug		each	248864
Tubing, copper, cleaned	1/8 x 0.070 I.D.	foot	111427
Tubing, stainless steel	1/16 x 0.030 I.D.	inch	193409
Tubing, urethane, clear	1/8 x 1/16 I.D.	foot	166224

Valves and Accessories–Eclipse

Product	Size	Unit	PN
Check valve, brass/nickel, 0.5 psi	10-32	each	321602
Drain valve assembly, 12V		each	321010
Four-port injection valve, KEL-F		each	321100
O-ring with mesh for valve PN 320594		each	321906
Sample valve mounting bracket		each	321079
Six-port valve, stainless steel	1/16"	each	321578
Three-port injection valve, KEL-F	1/4-28	each	169484
Three-way dry purge valve "B"		each	289546
Three-way isolation valve "A and C" (bake vent and backflush valve)		each	320594
Two-way manifold valve "F", brass/nickel, Viton, 12 V, for purge gas		each	315234
Valve manifold assembly		each	321174



We offer several finance programs for your convenience. Renting and leasing programs as well as our rent-to-own program allow you to get the equipment you need. Call and ask for details at (800) 653-1711.



Infra-Sparge Sample Heater Option Replacement Parts

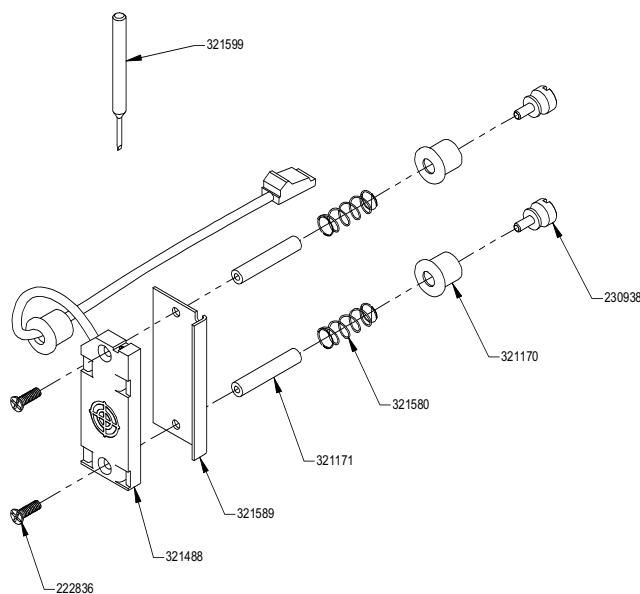
Product	Unit	PN
Door interlock magnetic cable	each	321134
Infra-Sparge lamp for Eclipse, 120 V, 300 W	each	321451
Infra-Sparge lamp for Eclipse, 230 V, 250 W	each	321452
Lamp cover assembly w/ filter	each	321736
Sample thermocouple assembly	each	321005
Sockets	2/pk	225664
Visible light filter	each	227173

Foam Buster Option Replacement Parts

Product	Size	Unit	PN
Block for Foam Buster		each	321125
Ferrule, Tefzel, flangeless	1/16"	5/pk	322248
Ferrule, Tefzel, flangeless	3 mm	each	321678
Ferrule, TFE	1/16 tube	each	177626
Ferrule, TFE	6 mm tube	each	224337
Fitting nut for Foam Buster needle, PEEK	1/16 x 1/4-28	each	322237
Fitting, stainless steel for Foam Buster heater	1/4-28 x 8 x 0.7	each	321469
Heater/sensor assembly for Foam Buster		each	321484
Sample needle for Foam Buster, frit sparging		each	321475
Sample needle w/ sidehole, needle sparging		each	321700
Set screw SOC stainless steel, CUP	4-40 x 1/8	each	131953
Sparge mount manifold for Foam Buster		each	320724

Sparge Overfill Sensor (SOS) Option Replacement Parts

Product	Size	Unit	PN
Bushing, snap	3/8" hole x 0.188" I.D.	each	321170
Compression spring, stainless steel	0.240 x 0.75	each	321580
SOS assembly		each	321488
SOS shield		each	321589
Standoff, brass, female/female	4-40 x 1.00	each	321171
Thumbscrew, brass/nickel	4-40 x 1/4	each	230938
Screwdriver for SOS adjustment	1.4 mm	each	321599



Sparge Overfill Sensor

Model 4560 Sample Concentrator Replacement Parts and Supplies

Cables—Model 4560

Product	Unit	PN
Cable for Model 4560 to any handshake pigtail cable	each	226530
Cable for Model 4560 to CFM	each	226548
Cable for Model 4560 to DPM-16, MPM-16, or MHC-16	each	226605
Cable for Shimadzu 17AGC	each	244483
Handshake pigtail cable for Agilent 5890 (MSD interface below)	each	185868
Handshake pigtail cable for Agilent 6890	each	252213
Handshake pigtail cable for Varian 3400/3600	each	188409
Handshake pigtail cable for Varian 3800	each	300368
Handshake pigtail cable to spade lugs	each	285924
RS-232-C cable (WinTrap <i>Plus</i>)	each	226621
H-remote start cable for Agilent 6890/6850	each	300954

Note: For appropriate cables for various instrument configurations, see “Cable Selection Guide” on page 36.

Cables for MSD Interface—Model 4560

Product	Unit	PN
Handshake pigtail cable for Agilent 5971 or 5972 (DOS or UNIX)	each	209874
Handshake pigtail cable for Agilent 5970 (RTE-A)	each	209882
Handshake pigtail cable for Agilent 5971 (PASCAL)	each	209866

Ferrules and Fittings—Model 4560

Product	Size	Unit	PN
Drain tube adapter assembly		each	234393
Ferrule for sparger inlet arm, Teflon	6 mm tube	each	224337
Ferrule, reverse, Teflon	1/16" tube	5/pk	272443
Ferrule, Teflon	1/16" tube	5/pk	196220
Ferrule, Teflon	18 mm tube	10/pk	224352
Ferrule, VespeI®	1/8"-1/16" tube	each	247882
Nut, female	18 mm	each	224675
Nut, knurled stainless steel, male	1/16"	each	217240
Spurge filter assembly for Model 4560/4551A/AMPS		each	209254
Spurge mount fitting		each	224600
Syringe port adapter, KEL-F, female, Luer-Lok	10-32	each	224584
Union bulkhead fitting for trap bulkhead		each	209098
Union for spurge inlet arm, brass, male	1/4"-1/16"	each	227223
Water management assembly		each	248062
Water management fitting		each	252874

Heaters and Thermocouples–Model 4560

Product	Unit	PN
Sample heater thermocouple assembly	each	234112
Sparge mount heater and thermocouple kit, 120 V	each	311738
Sparge mount heater and thermocouple kit, 240 V	each	310995
Sparge mount/water management heater cable, 110 V	each	233700
Sparge mount/water management heater cable, 220 V	each	242552
Valve manifold heater cable, 110 V	each	233718
Valve manifold heater cable, 220 V	each	242529
Valve manifold thermocouple	each	225516
Valve oven/sparge mount thermocouple assembly	each	227314
Valve/oven heater cable, 110 V	each	227157
Valve/oven heater cable, 220 V	each	242503
Water management thermocouple	each	317453

Infra-Sparge Sample Heater Parts–Model 4560

Product	Unit	PN
Lamp cover assembly	each	230060
Sample heater lamp for Model 4560, 120 V	each	225656
Sample heater lamp for Model 4560, 220 V	each	242479
Sample heater thermocouple assembly	each	234112
Sparge door assembly	each	230052

Miscellaneous Parts–Model 4560

Product	Unit	PN
Backup battery, 3.6 V	each	211953
CPU board for Model 4560	each	228098
Firmware EPROM w/ instructions for Model 4560	each	254870
Fuse, 6.3 amp Slo-Blo	each	249177
Fuse, 4.0 amp Fast Blo	each	228536
Fuse, 3.0 amp Fast Blo	each	228510

Miscellaneous Parts–Model 4560

Product	Unit	PN
Fuse, 3.15 amp Slo-Blo	each	257329
Model 4560 one year supplies kit	each	254714
Model 4560 operator’s manual	each	227959
Mud-Dawg	each	215061
Sparger wrench, 1 1/8" open end	each	227975

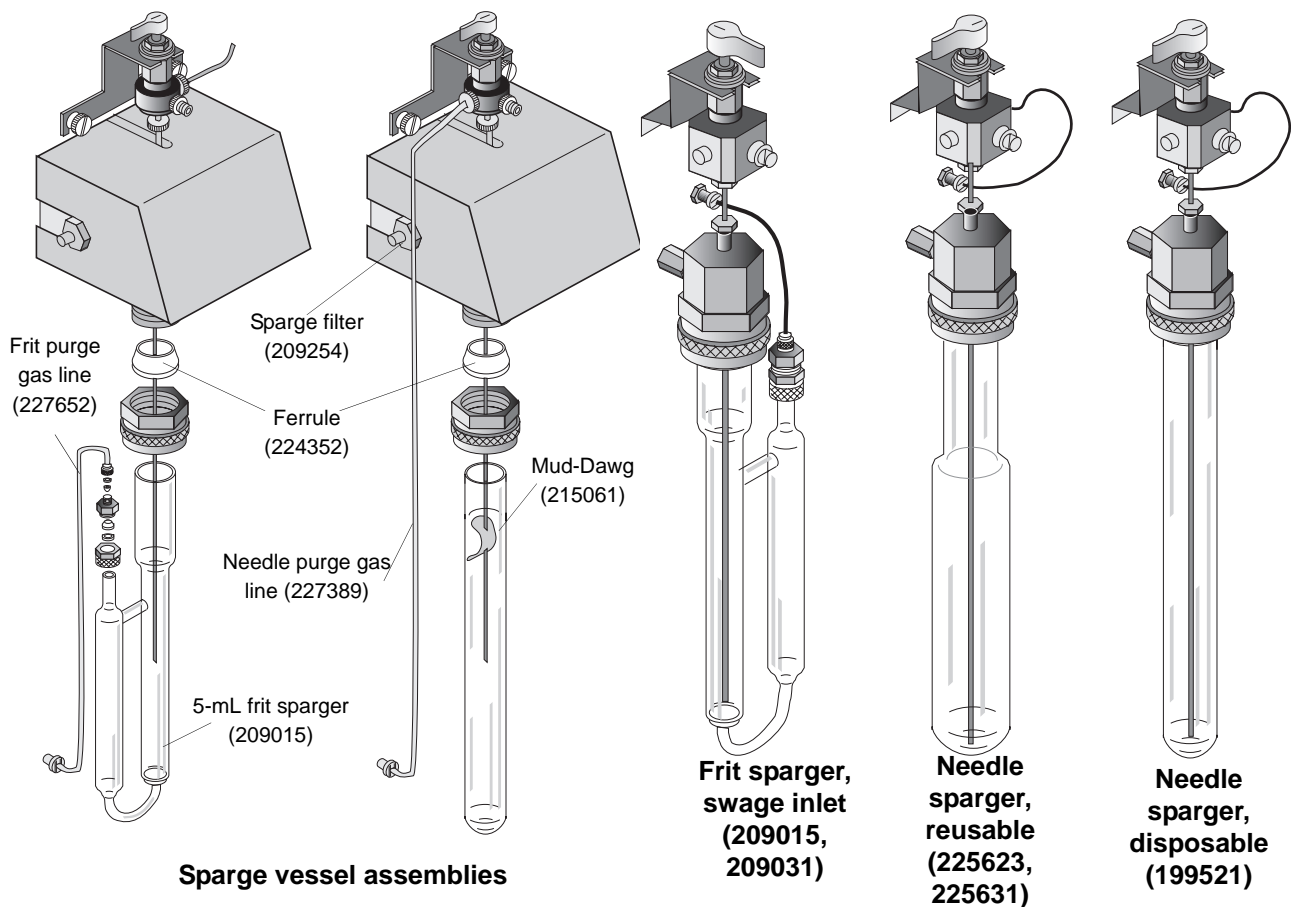
Needles–Model 4560

Product	Size	Unit	PN
Frit sparger	22.9 cm	each	209114
Frit/needle sparger	19.6 cm	each	203042
Needle sparger w/ side hole	22.9 cm	each	227371

Note: For appropriate needles for Model 4560 configurations, see “Purge Needle Selection Guide” on page 38.



Download the latest product and applications information at www.oico.com.



Spargers and Accessories—Model 4560

Product	Size	Unit	PN
Frit sparger, swage inlet	5 mL; 18 mm neck O.D.	each	209015
Frit sparger, swage inlet	25 mL; 18 mm neck O.D.	each	209031
Needle sparger hardware kit (no glassware)		each	227397
Needle sparger, disposable	10 mL; 18 mm neck O.D.	125/ case	199521
Needle sparger, swage inlet	5 mL; 18 mm neck O.D.	each	225623
Needle sparger, swage inlet	25 mL; 18 mm neck O.D.	each	225631
One-year supply kit for Model 4560		each	254714

Syringes—Model 4560

Product	Size	Unit	PN
Sample syringe w/ Luer-Lok	5 mL	each	177659
Sample syringe w/ Luer-Lok	25 mL	each	172461
Syringe	10 µL x 2" needle	each	167545

Transfer Lines—Model 4560

Product	Size	Unit	PN
Transfer line, 120 V	48"	each	249185
Transfer line, 240 V	48"	each	249466
Transfer line, 120 V	60"	each	249490
Transfer line, 240 V	60"	each	249508

Note: For sparger kits, see “Sparger Kits*—DPM-16” on page 29.

GC Sample Introduction Replacement Parts and Supplies

Traps–Model 4560

Product	Unit	PN
#0 Trap, blank (no sorbent)	each	228114
#7 Trap, Tenax® only	each	227348
#8 Trap, Tenax/silica gel	each	227363
#9 Trap, Tenax/silica gel/ charcoal	each	219972
#10 Trap, Tenax/silica gel/carbon molecular sieve	each	228122
#11 Trap, VOCARB® 3000	each	258830
#12 Trap, BTEX (Carbopack B/ Carbopack C)	each	258848
MicroTrap "A" Carboxen 1000 kit	each	291435
MicroTrap "B" Carbosieve kit	each	291443
MicroTrap "A" Carboxen 1000 replacement trap	each	283549
MicroTrap "B" Carbosieve replacement trap	each	287649

Tube Assemblies–Model 4560

Product	Unit	PN
Carrier gas FC six-port valve tube assembly for 1½" diameter regulator	each	307157
Carrier gas inlet six-port valve tube assembly	each	233999
Purge bulkhead/regulator tube assembly for 1½" diameter regulator	each	307116
Purge FC out/solenoid manifold tube assembly	each	227611
Purge gas/frit sparger tube assembly	each	227652
Purge gas/needle sparger tube assembly	each	227389
Purge out/gauge tube assembly	each	227603
Regulator in carrier gas FC in Model 4560 tube assembly for 1½" diameter	each	307124
Regulator out to purge gas FC tube assembly for 1½" diameter	each	307132
Regulator out/solenoid manifold tube assembly for 1½" diameter	each	307108
Six-port valve/sparge manifold tube assembly	each	227645
Solenoid manifold/purge valve tube assembly	each	247700
Solenoid manifold/six-port valve tube assembly	each	227447
Trap/six-port valve tube assembly	each	227637
Valve solenoid/sparge manifold tube assembly	each	228957

Tube Assemblies–Model 4560

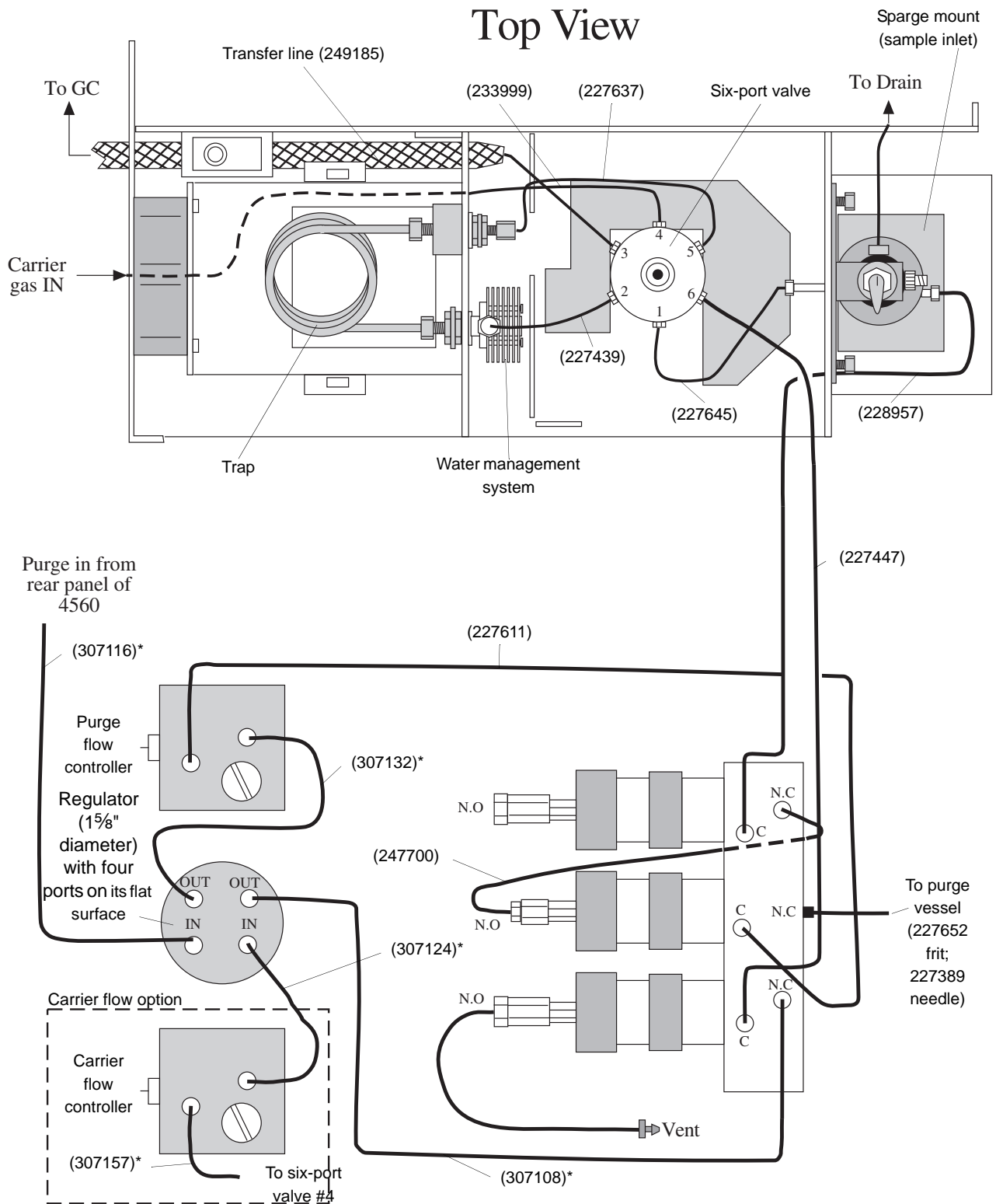
Product	Unit	PN
Water management/six-port valve tube assembly	each	227439
Pressure regulator upgrade kit to upgrade regulator and tubing to 1½" diameter regulator	each	307546

Tubing–Model 4560

Product	Size	Unit	PN
Copper tubing, cleaned	1/8" x 0.070 mm I.D.	foot	111427
Silicone tubing, clear (drain valve adapter)	3/32" x 3/32" I.D.	foot	179044
Silicone tubing, clear (drain valve)	1/8" x 1/16" I.D.	foot	179812
Urethane tubing, clear	1/8" x 1/16" I.D.	foot	166224

Valves–Model 4560

Product	Unit	PN
Check valve, 0.5 psi, 10-32	each	218928
Drain valve (pinch valve)	each	207761
Four-port sample valve, 10-32, KEL-F	each	237180
Six-port valve w/ actuator	each	249524
Six-port valve w/ linkage (no actuator), stainless steel	each	248575
Three-port sample valve, 10-32, KEL-F	each	218982
Three-way manifold valve, 12 V	each	289546



Plumbing schematic for Model 4560

*Units with serial numbers beginning with "K" or lower need to upgrade with the pressure regulator upgrade kit (PN 307546).

Model 4551A Water Autosampler Replacement Parts and Supplies

Fittings—Model 4551A

Product	Size	Unit	PN
Adapter	1/8" hose x 1/16"	each	178434
Adapter, brass	1/8"	each	166208
Bulkhead fitting, stainless steel	1/8" x 1/8"	each	285189
Coupling, TFE	1/4-28	each	166274
Cross swivel, brass/nickel	10/32	each	179499
Nut, polypropylene, Cheminert	1/8" x 1/4-28	each	284729
Nut, female, stainless steel	1/4"	each	169682
Nut, male, stainless steel	1/16"	each	223057
Nut, polypropylene	1/4-28, 1/8" tube	each	263764
Nut, stainless steel spring	1/16"	each	248757
Plug, brass/nickel	10/32 O-ring	each	177502
Tee, polypropylene	1/8"	each	279125
Union, stainless steel	6 mm x 1/16" tube	each	261313
Union, stainless steel	1/16"	each	294025

Glassware—Model 4551A

Product	Size	Unit	PN
Caps, open hole	for 40-mL vials	72/pk	296079
Reagent water bottle assembly		each	248915
Septa, silicon, Teflon faced	for 40-mL vials	72/pk	296061
Vial, wash/waste station		each	232801
VOA vial kit	40-mL vials w/ caps and septa	72/kit	296053

Miscellaneous Parts—Model 4551A

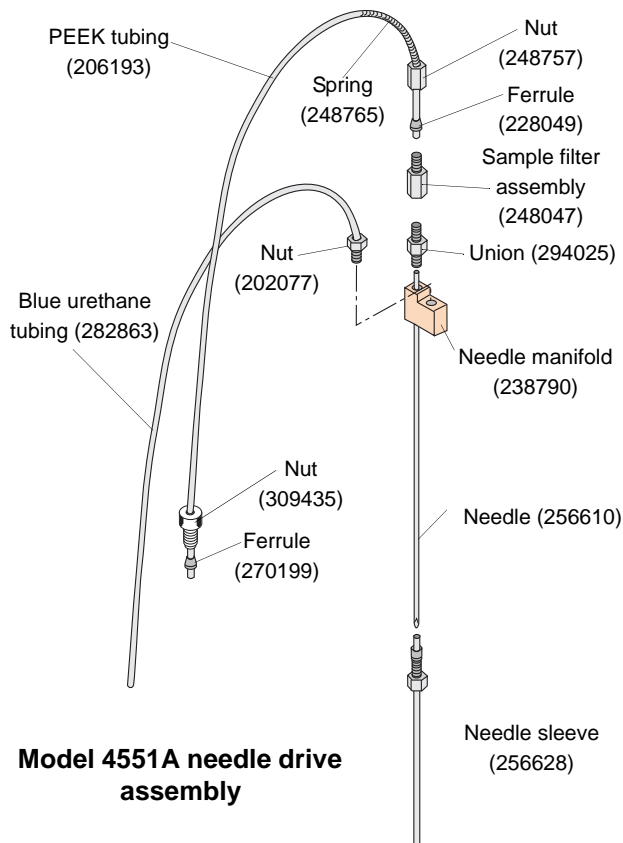
Product	Size	Unit	PN
Bushing, PEEK, Cheminert	1/8"	each	284828
Cable, BNC to BNC for Model 4560	3 ft.	each	235515
Cable, Eclipse to 4551A		each	321133
Carousel cover		each	321785
Check valve, polypropylene		each	182238
Door, 4560 for 4551A		each	257428
Ferrule, brass tube	1/16"	each	228049
Ferrule, PFA Cheminert	1/8"	each	284844
Ferrule, stainless steel tube	1/8"	each	227207
Ferrule, Teflon tube	6 mm	each	224337
Ferrule, Tefzel tube	1/16"	each	270199
Ferrule, Tefzel® tube	1/8"	each	263756
Firmware for Model 4551A (latest revision)		each	315945
Fuse, 2 amp, 250 V Slo-Blo		each	177453
Loop cover		each	257451
Main board		each	278101
Model 4551A operator's manual		each	310565
Needle drive assembly		each	282707
Needle drive cover		each	253518
Peristaltic sample pump assembly		each	263442
Power cord for North America, 110 V		each	116038
Pressure regulator, 0-60 psi gauge		each	282251
Pressure switch		each	270173
Reagent water pump, 24 V		each	296160
Sample filter assembly		each	248047
Sample loop	5 mL	each	261339
Sample loop	25 mL	each	259507
Sample tray assembly		each	234815
Septum piercing needle w/ ferrule attached		each	256610
Six-port valve assembly		each	293605
Three-way solenoid valve		each	282756
Transfer gas needle sleeve w/ nut and ferrule attached		each	256628
Upgrade kit for Eclipse operation		each	321608

Needle Drive Assembly Parts (see drawing)–Model 4551A

Product	Size	Unit	PN
Ferrule, brass tube	1/16"	each	228049
Ferrule, Tefzel tube	1/16"	each	270199
Sample filter assembly		each	248047
Needle manifold		each	238790
Septum piercing needle w/ferrule attached		each	256610
Transfer gas needle sleeve w/ nut and ferrule attached		each	256628
Nut, brass/nickel hose	1/16"	each	202077
Nut, male, stainless steel	1/16"	each	223057
Nut, stainless steel spring	1/16"	each	248757
Nut, polypropylene	1/4-28 x 1/16"	each	309435
Spring, stainless steel	0.125 O.D.	each	248765
PEEK tubing	1/16" x 0.040"	inch	206193
Urethane tubing, blue	1/8" O.D.	foot	282863
Union, male fitting	1/16"	each	294025

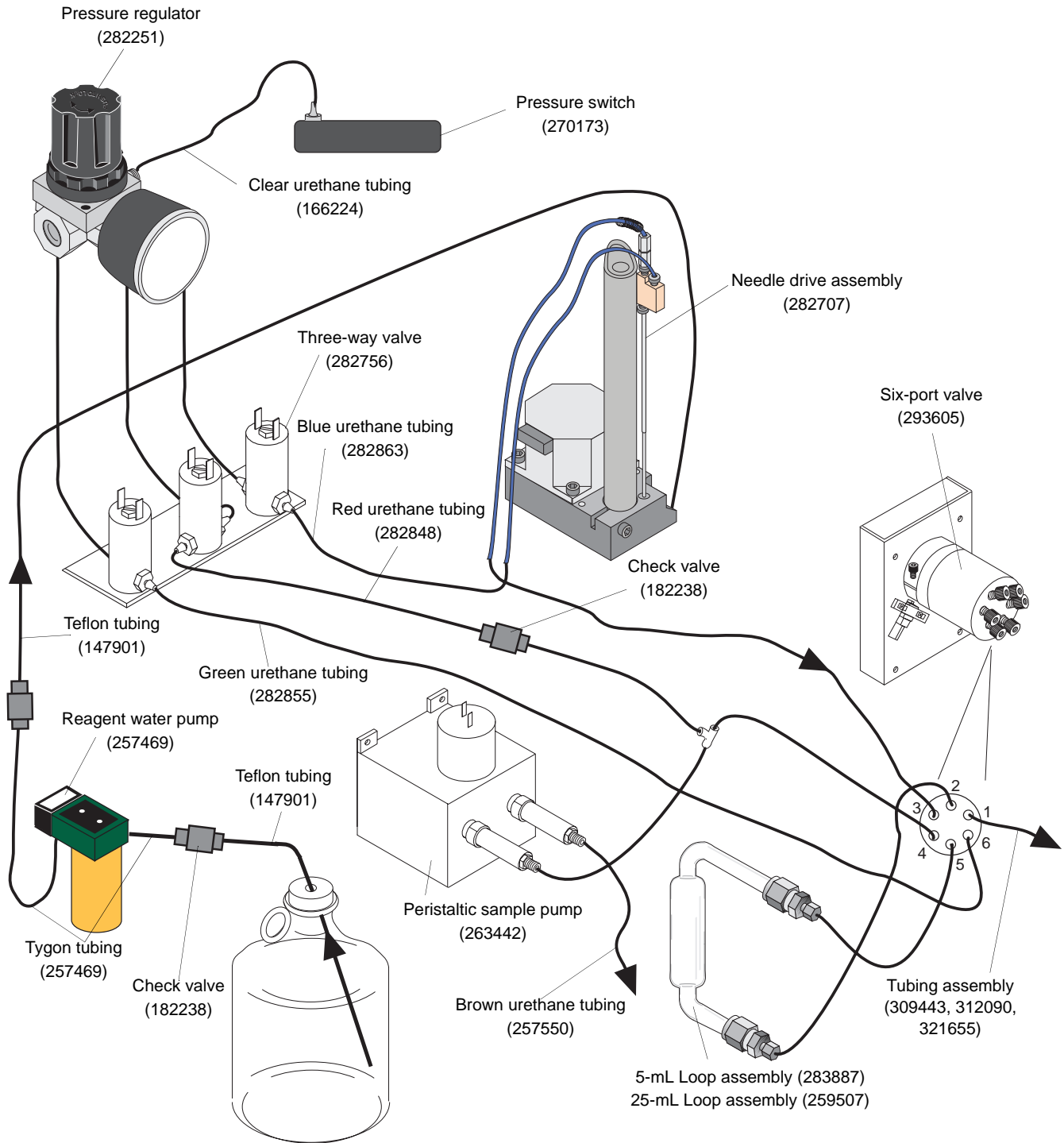
Tubing (see drawing)–Model 4551A

Product	Size	Unit	PN
PEEK tubing	1/16" x 0.040 I.D.	inch	206193
Sample pump tubing kit		each	277319
Stainless steel tubing	1/16" x 0.030 I.D.	each	295543
Teflon tubing	1/8" x 0.030 wall	foot	147901
Transfer line assembly, 4560/4551A		each	309443
Transfer line assembly, SAM/4551A		each	312090
Transfer line assembly, Eclipse/4551A		each	321655
Tygon tubing, clear	1/4" x 1/8" I.D.	inch	257469
Urethane tubing, blue	1/8" x 1/16" I.D.	foot	282863
Urethane tubing, brown	1/8" x 1/16" I.D.	inch	257550
Urethane tubing, clear	1/8" x 1/16" I.D.	foot	166224
Urethane tubing, green	1/8" x 1/16" I.D.	foot	282855
Urethane tubing, red	1/8" x 1/16" I.D.	foot	282848



Customer Communications

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Model 4551A tubing schematic

Model 4551 Water Autosampler Replacement Parts and Supplies

Glassware—Model 4551

Product	Size	Unit	PN
Caps, open hole	for 40-mL vials	72/pk	296079
Glass loop upgrade	5 mL	each	317016
Reagent water bottle assembly		each	248915
Septa, silicone, Teflon faced	for 40 mL vials	72/pk	296061
Vial, wash/waste station		each	232801
VOA vial kit	40 mL vials w/ caps and septa	72/kit	296053



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Miscellaneous Parts—Model 4551

Product	Size	Unit	PN
Back-up battery	3.6 V	each	211953
Cable, BNC to BNC	5 ft.	each	235515
Carousel cover		each	257436
Check valve		each	257527
Ferrule, brass tube	1/16"	each	228049
Ferrule, Tefzel tube	1/8"	each	263756
Ferrule, Tefzel tube	1/16"	each	270199
Fitting nut, polypropylene	1/4-28, 1/8" tube	each	263764
Fuse, 2 amp, 250 V Slo-Blo		each	211441
Fuse, 3.15 amp	5 mm x 20 mm	each	257329
In-line regulator, 0-60 psi gauge	1/8" female fittings	each	260414
Loop cover		each	257451
Model 4551 firmware (latest revision)		each	257147
Model 4551 operator's manual		each	235895
Needle drive cover		each	253518
Nut, female, stainless steel	1/16"	each	256966
Nut, male, stainless steel	1/16"	each	223057
Nut, stainless steel spring	1/16"	each	248757
Power cord for North America, 110 V		each	116038
Sample filter assembly		each	248047
Sample loop	5 mL	each	235911
Sample loop w/ clip	25 mL	each	263772
Sample loop w/o clip	25 mL	each	259507
Sample tray assembly		each	234815
Septum piercing needle w/ ferrule attached		each	256610
Six-port valve assembly		each	263673
Transfer gas needle sleeve w/ nut and ferrule attached		each	256628
Union, male, stainless steel, DSF	1/16"	each	253559

Needle Drive Assembly Parts (see drawing)–Model 4551

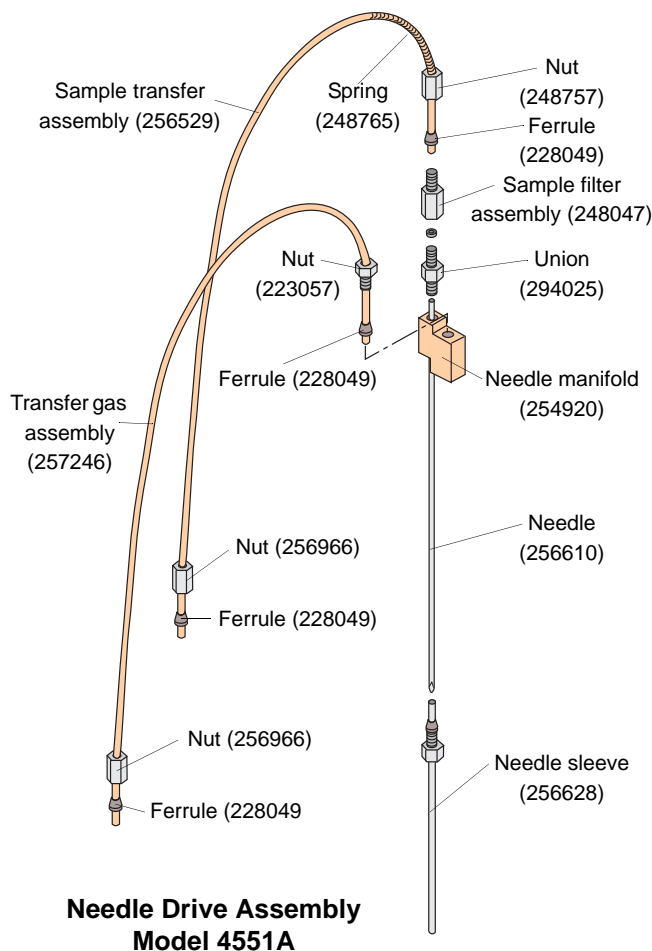
Product	Size	Unit	PN
Ferrule, brass tube	1/16"	each	228049
Ferrule, PEEK tube ring	1/16"	each	257675
Nut, female, stainless steel	1/16"	each	256966
Nut, male, stainless steel	1/16"	each	223057
Nut, stainless steel spring	1/16"	each	248757
Sample filter assembly		each	248047
Sample transfer assembly, PEEK		each	256529
Septum piercing needle w/ferrule attached		each	256610
Transfer gas assembly, PEEK		each	257246
Transfer gas needle sleeve w/nut & ferrule attached		each	256628
Union, male, stainless steel, DSF	1/16"	each	294025

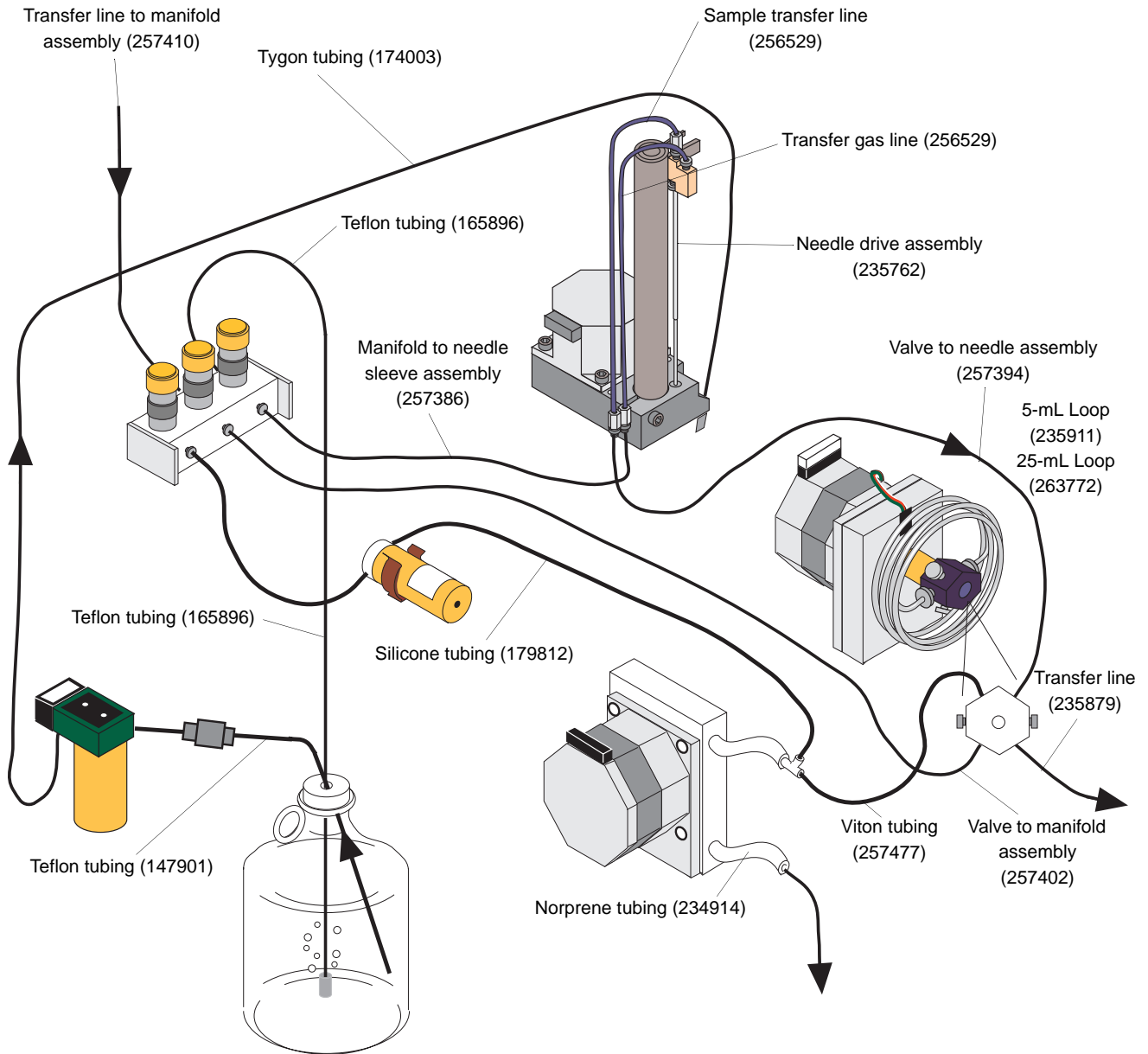
Tube Assemblies (see drawing)–Model 4551

Product	Unit	PN
Manifold to needle sleeve assembly	each	257386
Sample transfer line, PEEK	each	256529
Transfer gas line, PEEK	each	257246
Transfer line to manifold assembly	each	257410
Transfer line to Model 4560/transfer line to SIM A assembly	each	235879
Valve to manifold assembly	each	257402
Valve to needle assembly	each	257394

Tubing–Model 4551

Product	Size	Unit	PN
Copper tubing, cleaned	1/8" x 0.070 mm I.D.	foot	111427
Norprene® tubing	1/8" x 3/8" I.D. x 9"	each	234914
Silicone tubing, clear	1/8" x 1/16" I.D.	foot	179812
Teflon tubing	1/16" x 0.020 mm I.D.	foot	165896
Teflon tubing	1/8" x 0.030 wall	foot	147901
Tygon tubing	3/16" x 1/16" I.D.	foot	174003
Tygon tubing, clear	1/4" x 1/8" I.D.	inch	257469
Urethane tubing, brown	1/8" x 1/16" I.D.	inch	257550
Viton® tubing, black	1/4" x 1/8" I.D.	inch	257477



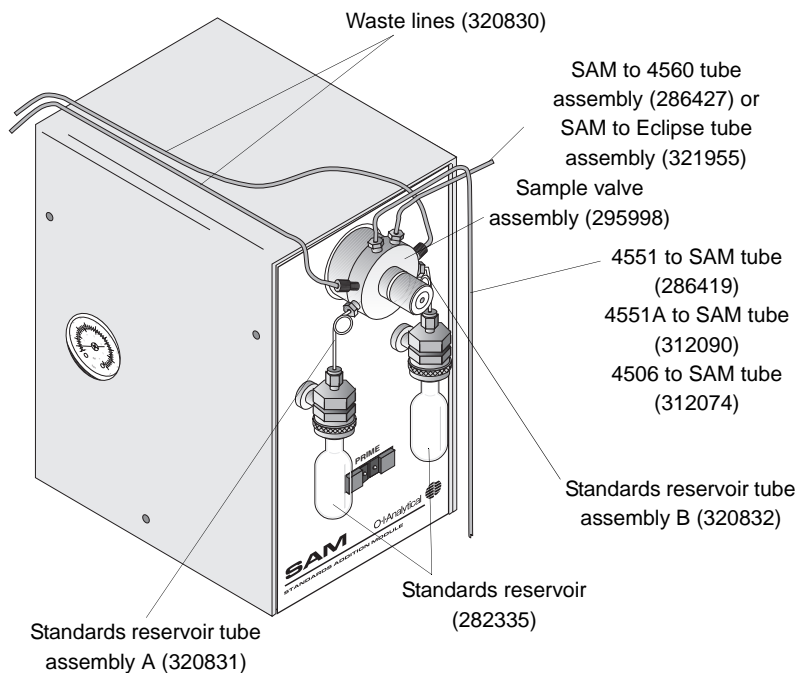


Model 4551 tubing schematic

Standards Addition Module (SAM) Replacement Parts and Supplies

Standards Addition Module (SAM) Parts

Product	Unit	PN
Waste line assembly	each	320830
Ferrule, 12 mm, Teflon	10/pk	223164
Fitting/ferrule for waste line, PEEK	each	309591
Interface cable, Model 4551 to SAM	each	282293
Interface cable, Model 4551A to SAM	each	294660
Regulator, 0–60 psi	each	282251
Standards reservoir	each	282335
Three-position valve w/actuator, 1- μ L loop	each	295998
Three-position valve w/o actuator, 1- μ L loop	each	282350
Tube assembly, Model 4506 to SAM	each	312074
Tube assembly, Model 4551 to SAM	each	286419
Tube assembly, Model 4551A to SAM	each	312090
Tube assembly, SAM to Model 4560	each	286427
Tube assembly, standards reservoir A	each	320831
Tube assembly, standards reservoir b	each	320832
Tube assembly, SAM to Eclipse	each	321955



Standards Addition Module

Model 4552 Water/Soil Autosampler Replacement Parts and Supplies

Accessories and Options—Model 4552

Product	Unit	PN
Bar code reader	each	276709
Recirculating bath for sample vial cooling	each	261909
Interface kit, 4552 to 4560	each	276592
Interface kit, 4552 to Tekmar	each	293043
Needle sparge conversion kit to SoilVial™	each	276717
Recirculating bath tubing kit	each	302810
Rinse water kit, for interfacing direct water line to Model 4552	each	276725
SoilVial conversion kit to needle sparge	each	276733

Gas Controllers—Model 4552

Product	Unit	Part #
Helium flow controller	each	03-504156-00
Purge gas pressure gauge	each	27-239992-00
Purge gas regulator	each	03-918707-04



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Interface Cables—Model 4552

Product	Unit	PN
Cable to OI Eclipse/4560 to Agilent	each	284935
Cable to Tekmar 2000/3000 with Agilent 5890 with 5970/71/72 MSD and Unix-B or MS-DOS, and 5890/5989 MS Engine	each	03-505874-00
Cable to Tekmar 2000/3000 with Agilent 6890	each	03-505873-00
Cable to Tekmar LSC-2000/3000 to Agilent 5890	each	03-505869-00
Cable to Tekmar LSC-2000/3000 to spade lugs	each	03-505872-00
Cable to Tekmar LSC-2000/3000 to Varian 3400/3700	each	03-505868-00
Cable to Tekmar LSC-2000/3000 with Agilent 5995/85/87/88/92	each	03-505876-00
Cable to OI 4460/4560 to Agilent 5890, RTE Agilent 1000 GC/MS software, Agilent 5970 MSD, or Agilent 5988 MS	each	03-505875-00
Handshake pigtail cable to Agilent 5890	each	185868
Handshake pigtail cable to Agilent 6890	each	252213
Handshake pigtail cable to Shimadzu 17A	each	244483
Handshake pigtail cable to Varian 3400	each	188409

Internal Standards Parts–Model 4552

Product	Size	Unit	PN
Ferrule for reservoir vial, Teflon	3/8"	each	03-694637-00
Rotor loop for standards valve	1 mL	each	03-505726-00
Six-port valve for internal standards, Valco®		each	03-505478-00
Six-port valve w/ motor for internal standards, Valco		each	03-505879-00
Standards reservoir mount		each	03-505604-00
Standards reservoir vial	5 mL	each	03-505484-00

Lines and Fittings–Model 4552

Product	Size	Unit	PN
Ferrule, stainless steel, Valco®	1/16"	5/pk	196246
Ferrule set, stainless steel, Swagelok®	1/16"	5/pk	178277
Ferrule for Eclipse water transfer line, Teflon	1/16"	5/pk	322248
Ferrule for Model 4560 water transfer line, Teflon	1/16"	5/pk	272443
Ferrule & nut, flangeless	1/16"	8/pk	03-700081-01
Fitting for Eclipse water transfer line, PEEK	1/16"	each	322231
Knurled fitting for Model 4560 water transfer line, stainless steel	1/16"	each	217240
Autosampler interface fitting adapter to Model 4560		each	278671
Waste line replacement kit		each	03-700019-90
Standards pick-up line		each	03-700020-00
Nut, female, stainless steel, Swagelok	1/16"	5/pk	169715
Soil purge gas transfer line, nickel tubing only		each	03-505745-00

Lines and Fittings–Model 4552

Product	Size	Unit	PN
Transfer line w/ heater assembly, Model 4560 or Tekmar 2000/3000		each	03-700001-01
Transfer line w/ heater assembly and bracket/clamp, Model 4560 or Tekmar 2000/3000		each	03-700025-90
Transfer line, stainless steel	0.062" x 0.40" x 60"	each	03-505514-00

Miscellaneous Parts–Model 4552

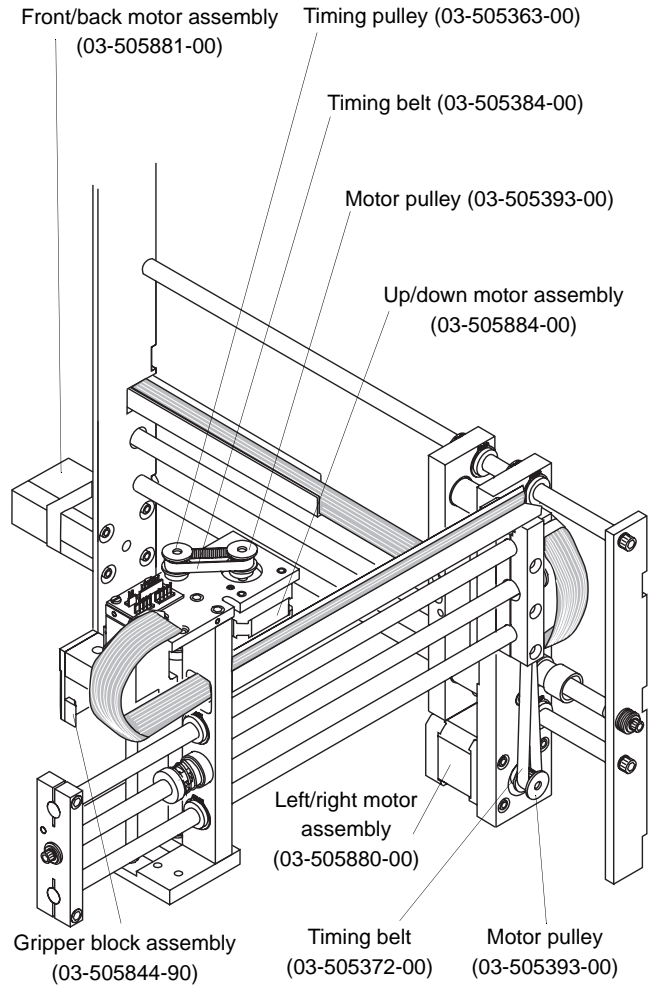
Product	Size	Unit	PN
Magnetic stir bar		each	03-502955-00
Reservoir bottle, safety coated	80 oz	each	03-503906-00
Wash bottle plug assembly		each	03-505816-00
Wash bottle top		each	03-503055-00
Water probe screen	10 µL	each	03-505598-00

Probe Assemblies–Model 4552

Product	Unit	PN
Needle sparge probe assembly (SN >996–13160)	each	03-505741-90
Needle sparge probe assembly (SN >13160)	each	03-700077-91
Probe guide support rod kit	each	03-700140-00
Soil probe assembly for double-ended vials (SN >996–13160)	each	03-505743-00
Soil probe assembly for double-ended vials (SN >13160)	each	03-700076-91
Lower soil purge gas needle assembly for double-ended vials	each	03-505463-00
Water probe assembly (S/N >995)	each	03-505739-00

Robotic Mechanism Parts—Model 4552

Product	Unit	PN
Elevator motor assembly	each	03-505878-00
Microswitch	each	03-500223-00
Motor assembly, front/back	each	03-505881-00
Motor assembly, left/right	each	03-505880-00
Motor assembly, up/down	each	03-505884-00
Motor assembly, stir	each	03-505883-00
Motor pulley, ¼" for elevator and syringe	each	03-505429-00
Motor pulley, front/back, left/right, and up/down	each	03-505393-00
Probe block heater assembly (SN <13161)	each	03-505895-00
Sensor assembly, no vial	each	03-505269-00
Soil/Vial and upper soil heater assembly	each	03-505896-00
Syringe and elevator limit switch assembly	each	03-505273-00
Timing belt, front/back motor	each	03-505362-00
Timing belt, left/right motor	each	03-505372-00
Timing belt, up/down motor	each	03-505384-00
Timing belt, vial elevator and syringe motors	each	03-505477-00
Timing pulley, leadscrew	each	03-505363-00
Transfer line heater assembly	each	03-700001-01
Vial gripper block assembly	each	03-505844-00
Vial gripper piston and O-ring	each	03-505389-00
Water heater assembly	each	03-505596-00
Syringe motor assembly	each	03-505878-00
Upper soil valve heater assembly (SN >13160)	each	03-700072-01
Gripper ring	each	03-101662-00



Model 4552 robotic mechanism schematic

Syringe Parts–Model 4552

Product	Size	Unit	PN
Glass syringe barrel		each	03-502968-00
Plunger assembly	26 mL	each	03-700060-91
Plunger drive bracket		each	03-505439-00
Plunger rod		each	03-502959-00
Syringe mixing manifold assembly		each	03-505830-00
Syringe mount		each	03-505450-00
Syringe O-ring		each	03-505495-00
Syringe packing		each	03-505441-00
Syringe thumbscrew		each	03-500007-00
Syringe, Luer-Lok	5 mL	each	290320
Water probe screen	10 µm	each	03-505598-00



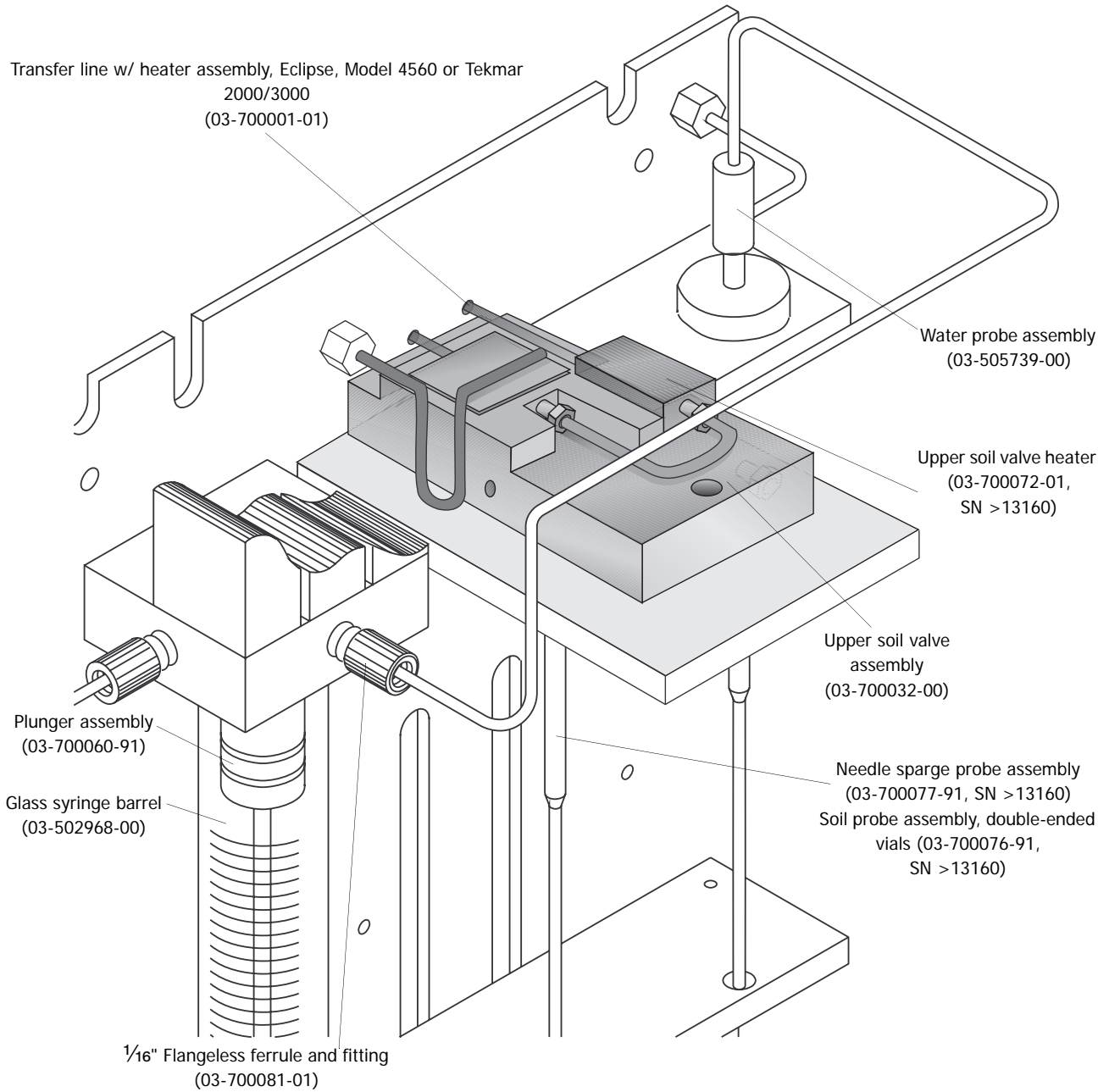
For international pricing, contact your local OI Analytical representative. For contact information, visit us at www.oico.com.

Valves–Model 4552

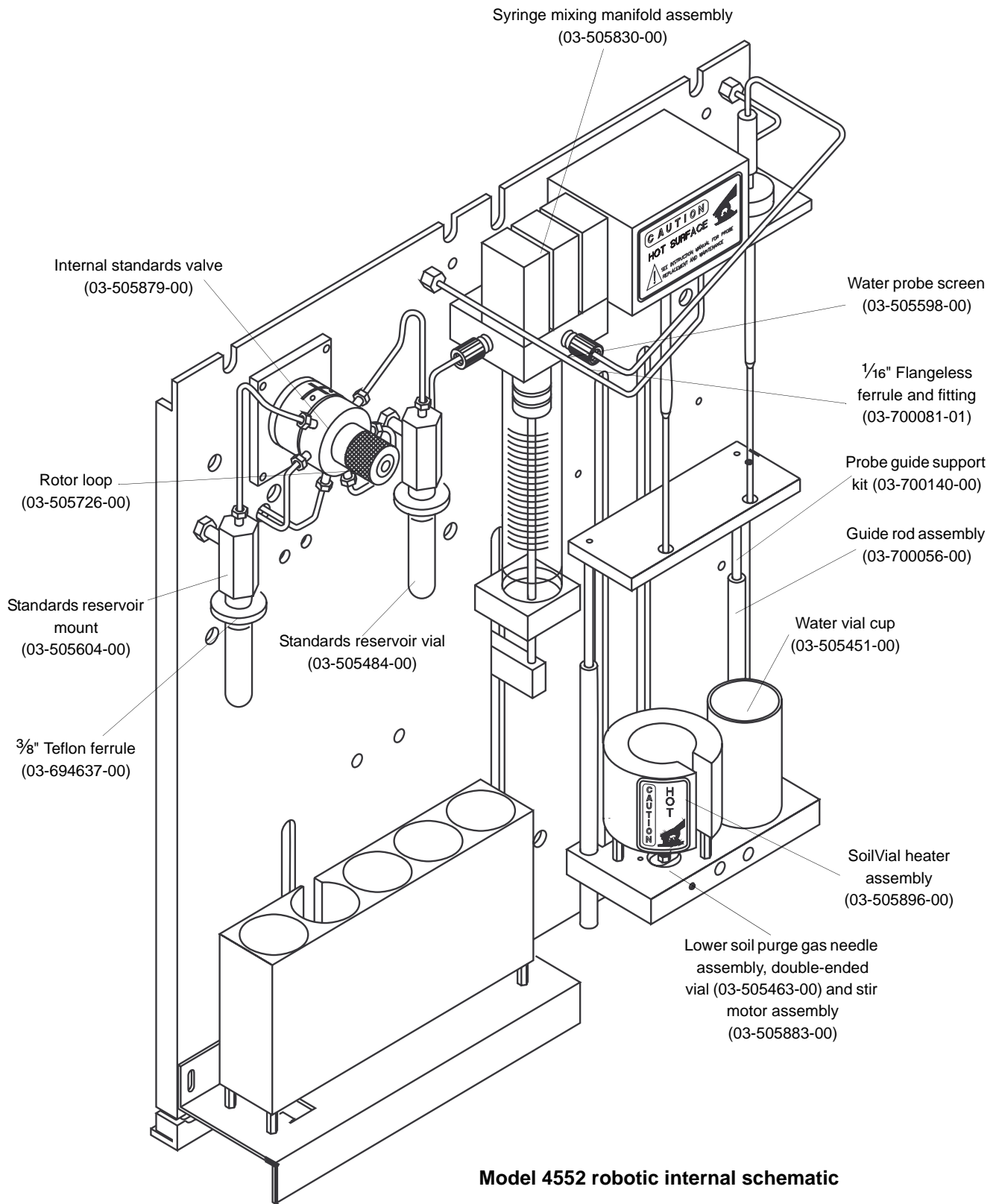
Product	Unit	PN
Burkert solenoid valve assembly	each	03-505720-00
Helium manifold replacement assembly	each	03-700108-90
Purge gas cut-off valve assembly (SN >995 & <12047)	each	03-505791-00
Purge gas cut-off valve J19 assembly (SN >12047)	each	03-505899-03
Solenoid mixing manifold assembly	each	03-505831-00
Three-way gripper solenoid valve assembly, standard mount	each	03-505899-02
Three-way pressure gas solenoid valve assembly, manifold mount (SN >12953)	each	03-700112-00
Three-way upper soil valve, heated (SN >120039)	each	03-700032-00
Two-way soil purge gas solenoid valve assembly, standard mount	each	03-505899-01
Two-way soil transfer gas solenoid valve assembly, manifold mount (SN >12953)	each	03-700111-00

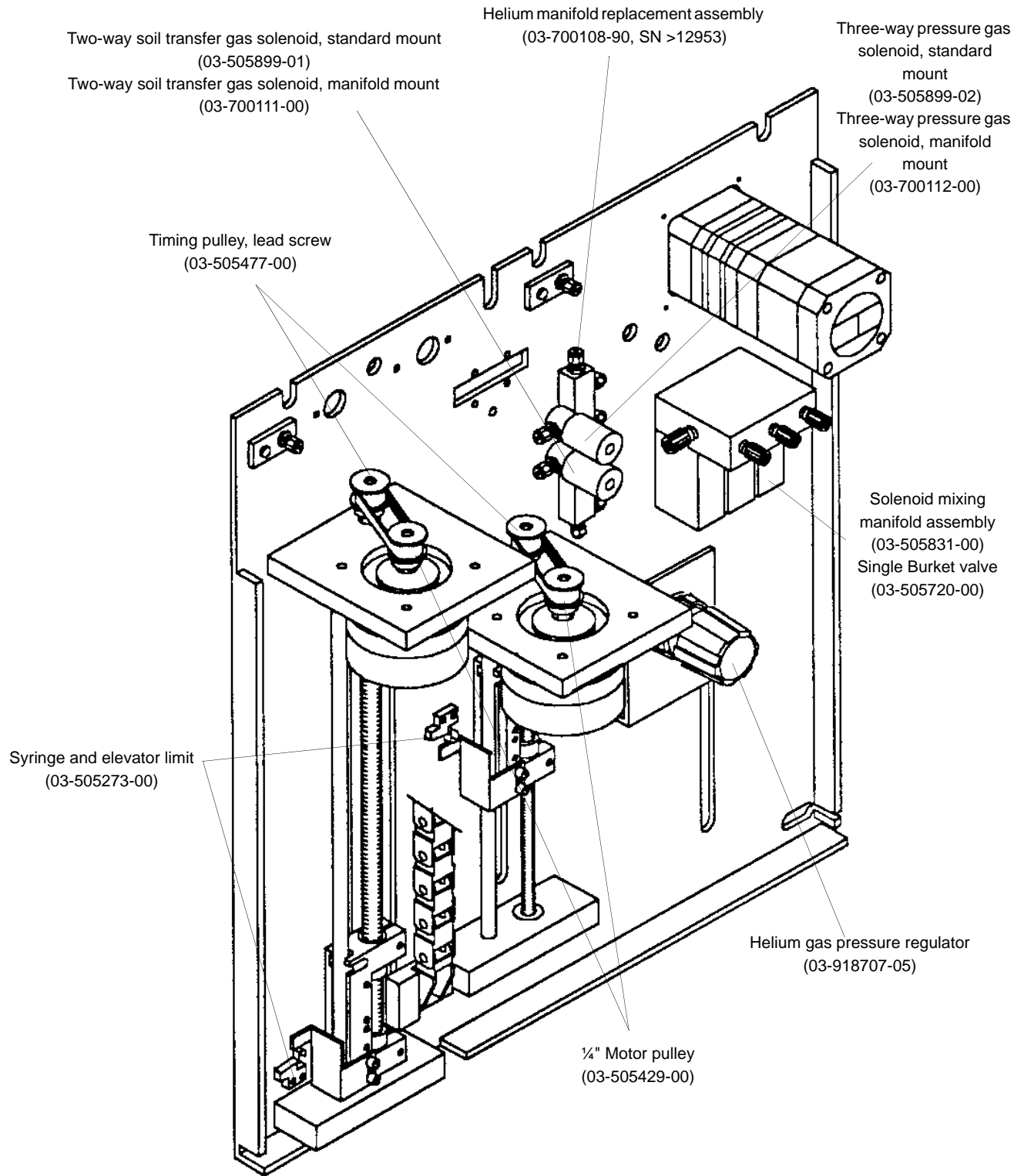
Vials and Septa–Model 4552

Product	Size	Unit	PN
Screw cap vials, w/ caps and septa	40 mL	72/pk	296053
Septa for water vial, Teflon/silica		72/pk	296061
Soil septa, low bleed		300/pk	03-504104-00
SoilVial	40 mL	6/pk	03-504099-00
Stir bars for SoilVial		6/pk	03-504024-00
Stir bars for water vials	40 mL	each	03-502955-00
Water vial cup		each	03-505451-00
Water vials, USEPA	40 mL	72/pk	03-630068-00



Model 4552 robotic internal schematic





Model 4552 robotic internal schematic

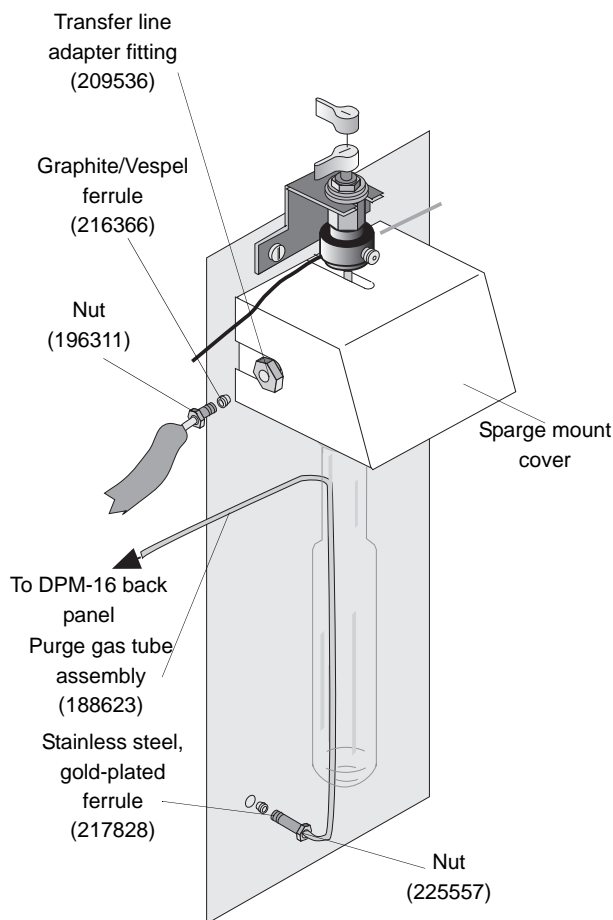
DPM-16 Autosampler Replacement Parts and Supplies

Ferrules–DPM-16

Product	Size	Unit	PN
Brass reverse ferrule	1/16" tube	each	228049
Graphite/Vespel ferrule	1/16" tube	10/pk	216366
KEL-F ferrule	1/4-28, 1/16" x 0.8 mm	5/pk	196204
Stainless steel, gold-plated ferrule	1/16" tube	5/pk	217828
Stainless steel ferrule	1/16" tube	5/pk	196246
Teflon ferrule	1/16" tube	5/pk	196220
Teflon ferrule	6 mm tube	each	224337
Teflon ferrule	18 mm tube	10/pk	224352

Gas Line Connections (see drawing)–DPM-16

Product	Size	Unit	PN
Model 4560 transfer line adapter fitting		each	209536
Nut, male, stainless steel	1/16" x 1"	each	225557
Nut, male, stainless steel	1/16"	5/pk	196311
Purge gas tube assembly, Model 4560 to DPM		each	188623



Gas lines connecting the Model 4560 to the DPM-16

Heater Jacket Kits–DPM-16

Product	Size	Unit	PN
Frit sparger, 110/220 V	5 or 25 mL	each	218669
Frit sparger, 110/220 V	5 or 25 mL	16/kit	218651
Needle sparger, 110/220 V	5 mL	each	198739
Needle sparger, 110/220 V	5 mL	16/kit	198689
Needle sparger, 110/220 V	25 mL	each	199406
Needle sparger, 110/220 V	10 or 25 mL	16/kit	198697

Miscellaneous Parts–DPM-16

Product	Size	Unit	PN
DPM-16 transfer line		each	247783
DPM-16/MHC-16 operator's manual		each	248393
Fuse, 5 amp, Slo-Blo	5 x 20 mm	each	313205
Fuse, 500 mA, Slo-Blo	5 x 20 mm	each	249987
Heated transfer line	48"	each	247783
Mud-Dawgs		50/pk	215061
Sample valve mounting bracket		each	252049

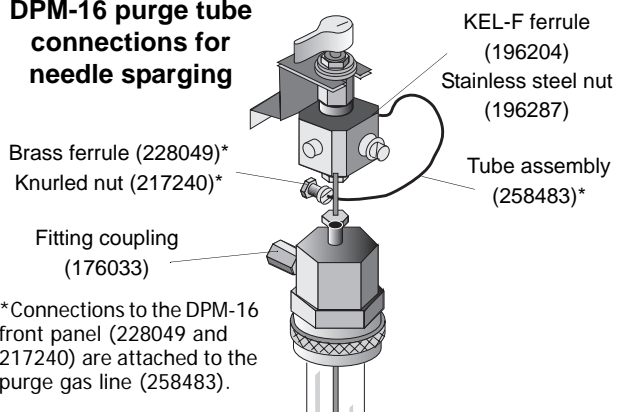
Needles–DPM-16

Product	Size	Unit	PN
Sample needle for frit sparger	19.6 cm	each	203042
Sample needle w/ side hole, for needle sparger	19.5 cm	each	232348

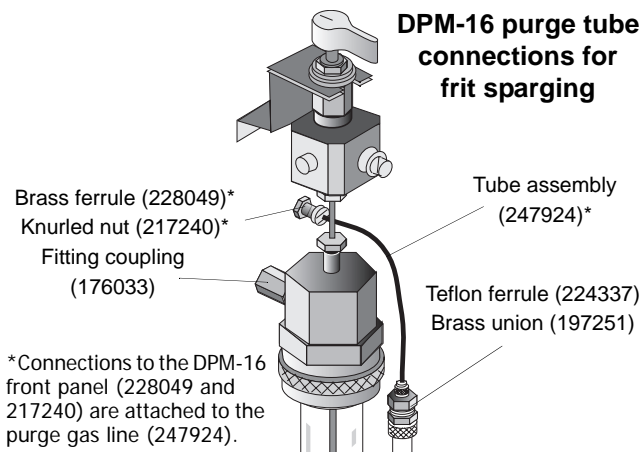
Purge Tube Connections (see drawing)–DPM-16

Product	Size	Unit	PN
Coupling fitting, brass/nickel	10-32		176033
DPM-16 frit sparging purge tube assembly		each	247924
DPM-16 needle sparging purge tube assembly		each	258483
Ferrule, KEL-F	¼-28, ⅛" x 0.8 mm	5/pk	196204
Ferrule, Teflon	6 mm tube	each	224337
Knurled nut, male, stainless steel	⅛"	each	217240
Nut, aluminum	¼-28, ⅛"	5/pk	196287
Reverse ferrule, brass	⅛" tube	each	228049
Union, female, stainless steel	⅛" - ⅛"	each	218081
Union, male, brass	¼" - ⅛"	each	197251

DPM-16 purge tube connections for needle sparging



DPM-16 purge tube connections for frit sparging



GC Sample Introduction Replacement Parts and Supplies

Sample Valve and Sparge Mount Assemblies (see drawing)–DPM-16

Product	Size	Unit	PN
Ferrule, Teflon	1/16" tube	5/pk	196220
Ferrule, Teflon	18 mm tube	10/pk	224352
Knurled nut, female, stainless steel	18 mm	each	224675
Knurled nut, male, stainless steel	1/16"	each	217240
Luer-Lok fitting, female, KEL-F	1/4-28	each	169468
Nut, aluminum	1/4-28, 1/16"	5/pk	196287
Nut, male, stainless steel	1/16"	5/pk	196311
Sample needle w/ side hole, for needle sparger	19.5 cm	each	232348
Sample valve mounting bracket		each	252049
Three-port sample valve, KEL-F	1/4-28	each	169484
Union w/o nut, stainless steel, gold-plated	18 mm	each	271809
Union, male, brass	1/4"-1/16"	each	197251

Sparger Kits*–DPM-16

Product	Size	Unit	PN
Frit spargers	5 mL, 18 mm neck O.D.	16/kit	247916
Frit spargers	25 mL, 18 mm neck O.D.	16/kit	247932
Needle spargers	5 mL, 18 mm neck O.D.	16/kit	232207
Needle spargers	25 mL, 18 mm neck O.D.	16/kit	232223
Needle spargers, disposable	10 mL, 18 mm neck O.D.	125/case	199521

*For individual spargers, see "Glassware Selection Guide" on page 37.

Syringes–DPM-16

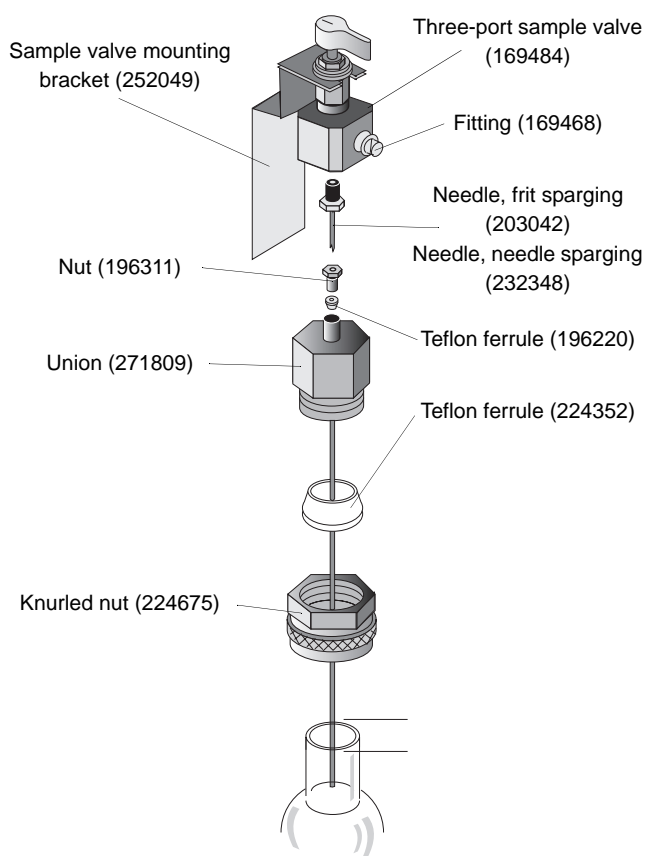
Product	Size	Unit	PN
Sample syringe w/ Luer-Lok	5 mL	each	177659
Sample syringe w/ Luer-Lok	25 mL	each	172461
Syringe	10 µL x 2" needle	each	167545

Tube Assemblies–DPM-16

Product	Unit	PN
DPM-16 frit sparging purge tube assembly	each	247924
DPM-16 needle sparging purge tube assembly	each	258483

Valves–DPM-16

Product	Unit	PN
Three-port sample valve, KEL-F, 1/4-28	each	169484
Three-port valve w/ electric actuator, stainless steel, 110 V	each	187179



DPM-16 sample valve and sparge mount assembly

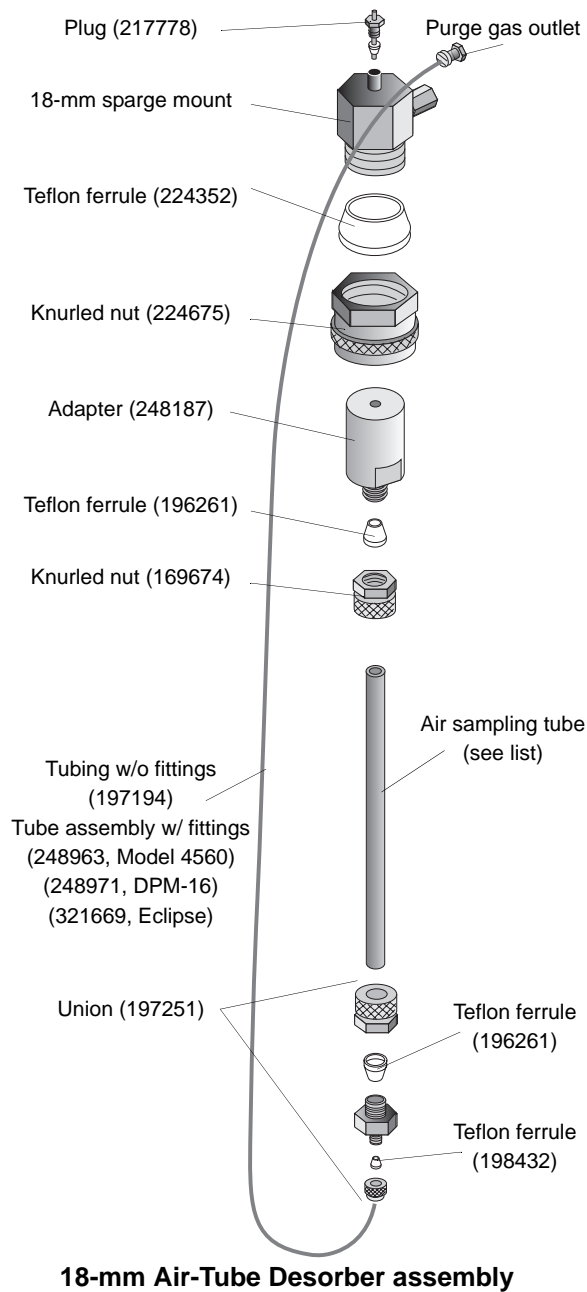
Air Analysis Products Replacement Parts and Supplies

Air Sampling Tubes and Containers

Product	Size	Unit	PN
Air-Tube shipping container	6 mm O.D., 4.5" L	each	260307
Blank trap, glass	6 mm O.D. 4.5" L	each	260208
Blank trap, stainless steel	¼" O.D., 4.5" L	each	260174
Carbon molecular sieve trap, glass	6 mm O.D., 4.5" L	each	260224
Carbon molecular sieve trap, stainless steel	¼" O.D., 4.5" L	each	260190
Tenax trap, glass	6 mm O.D., 4.5" L	each	260216
Tenax trap, stainless steel	¼" O.D., 4.5" L	each	260182

Air-Tube Desorber Accessories (see drawings)

Product	Size	Unit	PN
Adapter, stainless steel, gold-plated	18 mm-¼"	each	248187
Air Tube, stainless steel, glass-lined	¼" O.D. x 4.75"	each	197319
DPM purge to Air-Tube assembly		each	248971
Ferrule, Teflon	⅛" tube	10/pk	198432
Ferrule, Teflon	¼" tube	5/pk	196261
Ferrule, Teflon	18 mm tube	10/pk	224352
Knurled nut, female, stainless steel	¼"	each	169674
Knurled nut, female, stainless steel	18 mm	each	224675
Tube assembly, Model 4560 to Air-Tube		each	248963
Tube assembly, Eclipse to Air-Tube		each	321669
Plug w/ ferrule, male, stainless steel	⅛" tube	each	217778
Tubing w/o fittings, PEEK	⅛" x 0.020 mm I.D.	each	197194
Union w/ ferrules, male, brass	¼" x ⅛"	each	197251



Cryo-Focusing Module (CFM) Replacement Parts and Supplies

Boards–CFM

Product	Unit	PN
Backplane board	each	203661
Front panel LED board	each	203596
Front panel thumbwheel board	each	203604
Microprocessor board	each	203810
Power supply board	each	203802

Cables–CFM

Product	Unit	PN
CFM injector to ground cable	each	229401
CFM to injector cable, Agilent 5890	each	204024
CFM/4560/4552 cable	each	297309
CFM/4560/4552/Agilent GC cable	each	297259
GC ready invert cable	each	297234
Handshake pigtail cable, Agilent 5890/6890	each	185868
Model 4560 to CFM cable	each	226548
Thermocouple probe cable	each	216838

Ferrules–CFM

Product	Size	Unit	PN
Graphite/Vespel ferrule	1/16" x 0.8 mm tube	10/pk	196105
Graphite/Vespel ferrule	1/16" x 0.5 mm tube	10/pk	196113
Graphite/Vespel ferrule	1/16" tube	10/pk	216366
Graphite/Vespel ferrule adapter	1/16" x 0.5 mm	5/pk	217679
Graphite/Vespel ferrule adapter	1/16" x 0.4 mm	5/pk	217687
Graphite/Vespel ferrule adapter	1/16" x 0.8 mm	5/pk	216416
Graphite/Vespel ferrule adapter	1/16" x 0.2 mm	5/pk	217695

Fittings–CFM

Product	Size	Unit	PN
Extended nut, female	1/16"	each	218024
Injector end union, stainless steel		each	202671
Union, female, brass	1/4-1/8"	each	208785

Miscellaneous Parts–CFM

Product	Size	Unit	PN
Ceramic column cutter		3/pk	206888
CFM control module		each	203836
CFM operator's manual		each	202879
CFM valve assembly		each	203554
Exhaust tube assembly		each	218123
Fuse, 2 amp		each	115493
Heater assembly for CFM injector, 115 V		each	205708
Injector assembly for Agilent 5890, 115 V		each	202580
Locking ring, aluminum	1.25 x 0.75	each	206409
Power cord, 110 V		each	116038
Septa, silicone	3.3 mm x 0.125	10/pk	217984
Syringe	10 µL x 2"	each	167545
Type K thermocouple w/ plug	10"	each	202846
Type K thermocouple, 0.20", stainless steel		each	208314

Tubing–CFM

Product	Size	Unit	PN
Alumina tubing	1/16" x 0.031 x 6.5	each	206557
Cryogen supply line		each	208256
Fused silica DB-1 precolumn tubing	0.53 mm I.D.	5/pk	226134
Uncoated fused silica precolumn tubing	0.53 mm I.D.	5/pk	202754



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Low-Dead-Volume Injector (LDVI) Replacement Parts and Supplies

Low-Dead-Volume Injector Parts

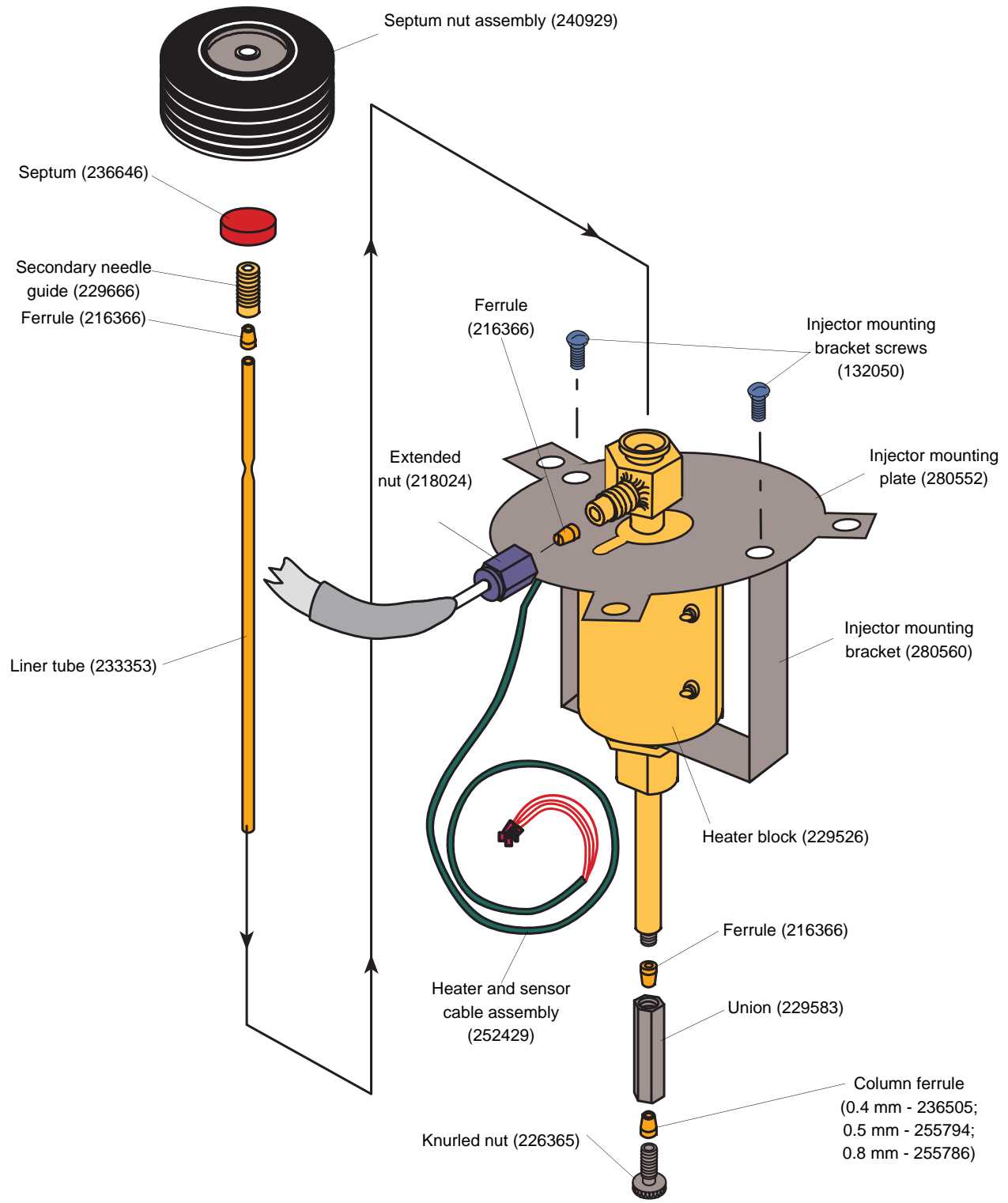
6890	5890	Product	Size	Unit	PN
■		Allen wrench	3/32	each	233346
■	●	Extended nut, female, stainless steel	1/16"	each	218024
■	●	Ferrule, graphite/Vespel	1/32" x 0.4 mm	each	236505
■	●	Ferrule, graphite/Vespel	1/16" tube	10/pk	216366
■	●	Ferrule, graphite/Vespel	1/32" x 0.5 mm	6/pk	255794
■	●	Ferrule, graphite/Vespel	1/32" x 0.8 mm	6/pk	255786
	●	Heater		each	226340
■		Heater and sensor cable assembly		each	252429
■		Heater block		each	229526
■	●	Injector body, stainless steel, gold-plated		each	242586
■		Injector mounting bracket		each	280560
■		Injector mounting bracket screws		each	132050
■		Injector mounting plate		each	280552
	●	Installation and maintenance guide		each	236414
■		Installation and maintenance guide		each	280586
■	●	Knurled nut, male, stainless steel	1/32"	each	226365
■		Liner tube		each	233353

Low-Dead-Volume Injector Parts

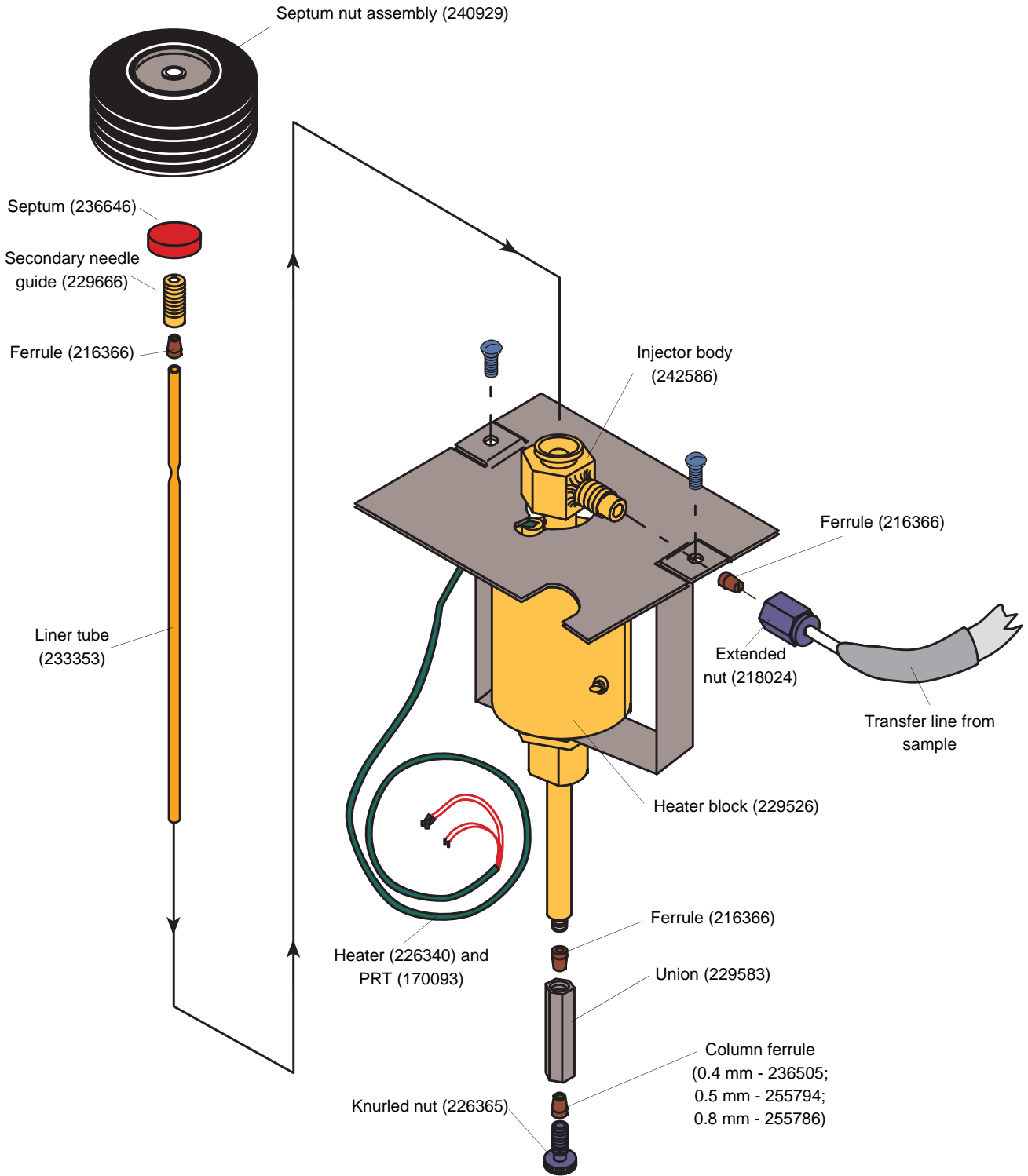
6890	5890	Product	Size	Unit	PN
■		Locking hex nut		each	214817
■		Mounting screws, TORX M4X10		each	252585
	●	PRT		each	170093
■	●	Secondary needle guide	26 gauge	each	229666
■	●	Septum	1/4" x 0.125"	5/pk	236646
■	●	Septum nut assembly	26 gauge	each	240929
■	●	Union, female, stainless steel	1/32" x 1/16"	each	229583

Column Ferrules—LDVI

Product	Column Size	Unit	PN
Ferrule, graphite/Vespel, 1/32" x 0.4 mm	0.25 mm	each	236505
Ferrule, graphite/Vespel, 1/32" x 0.5 mm	0.32 mm	6/pk	255794
Ferrule, graphite/Vespel, 1/32" x 0.8 mm	0.53 mm	6/pk	255786



Low-Dead-Volume Injector for Agilent 6890 GC



Low-Dead-Volume Injector for Agilent 5890 GC

Cable Selection Guide

Connecting the Eclipse Sample Concentrator to a GC requires a handshake cable that matches the GC type and model. Also, order a LAN cable if connecting to a LAN hub (PN 321902).

GC	Cable PN
Agilent 6890N H-cable required for the 6890N or if starting any other external device or non-Agilent data handling device using the same GC	252213 (300954)
Agilent 6890A/6890MS	252213
Agilent 6850	252213
Agilent 6850 GC/MS	252213 and 300954
Agilent 5890/4890	185868
Agilent 5970/5972MS (Pascal)	209866
Agilent 5970 (RTE-A)	209882
Varian 3800/3900	300368
Varian 3400	188409
Shimadzu 17A	244483
Thermo Finnigan Trace Also order Thermo Finnigan part number 119245-0001 to interface to a split/splitless injector	319822
Other Use a generic spade lugs handshake cable	285924

Interfacing a purge-and-trap sample concentrator to an autosampler requires a cable and an interface kit.

Autosampler	Sample Concentrator	GC	Cable PN	Interface Kit PN
Model 4552	Model 4560	Agilent	284935 ¹ and 252213	276592
	Eclipse	Agilent	284935 ¹ and 252213	321728
	Eclipse	Varian 3400/3600	284935 ¹ and 188409	321728
	Model 4560	Varian 3400/3600	284935 ¹ and 188409	276592
	Eclipse	Agilent 5890/5970 MSD	03-505875-00	321728
	Model 4560	Agilent 5890/5970 MSD	03-505875-00	276592
	Tekmar 2/3000/3100/Velocity	Agilent 6890	03-505873-00	293043
	Tekmar 2/3000/3100/Velocity	Varian 3800	03-925673-01	293043
	Tekmar 2/3000/3100/Velocity	Varian 3400/3600	03-505868-00	293043
	Tekmar 2/3000/3100/Velocity	Agilent 5890	03-505869-00	293043
	Tekmar 2/3000/3100/Velocity	Agilent 5890/5970 MSD	03-505874-00	293043
	Tekmar 2/3000/3100/Velocity	MS-5895/85/87/88/92	03-505876-00	293043
	Tekmar 2/3000/3100/Velocity	Other (spade lugs)	03-505872-00	—
Model 4551A	Eclipse/Model 4560	Any ²	Included	Included

¹ Included in interface kit (PN 276592 and 321728).

² Order the appropriate handshake cable.

Glassware Selection Guide

Sparger	Size	Neck	Eclipse	Model 4560	Model 4551A	DPM	SAM	Model 4552	Single Piece PN	Kit PN	Units per kit
Frit	5 mL	18 mm	✓						321478	—	—
Frit	5 mL	18 mm		✓		✓			209015	247916	16
Frit	25 mL	18 mm	✓						321479	—	—
Frit	25 mL	18 mm		✓		✓			209031	247932	16
Frosted frit ³	5 mL	18 mm	✓						321080	—	—
Frosted frit ³	25 mL	18 mm	✓						321081	—	—
Needle	5 mL	18 mm		✓		✓			225623	232207	16
Needle	25 mL	18 mm		✓		✓			225631	232223	16
Frosted needle	5 mL	18 mm	✓						321696	—	—
Frosted needle	25 mL	18 mm	✓						321697	—	—
Disposable needle	10 mL	18 mm		✓		✓			—	199521	125
Reservoir	10 mL	12 mm					✓		282335	—	—
Reservoir	5 mL	3/8"						✓	03-505484-00	—	—
Vial Kit ⁴	40 mL	28 mm			✓			✓	—	296053	72
Vial Kit ^{4,5}	40 mL	28 mm						✓	—	03-630068-00	72
Soil Vials (double-ended)	—	—						✓	—	03-504099-00	6
Wash/waste station vial	—	—			✓				232801	—	—

³ Required for the Foam Buster option.

⁴ Includes caps and septa.

⁵ Recommended for heated soil or solids applications.

Purge Needle Selection Guide

Sparger	Purge Needles Size	Neck	Eclipse	Model 4560	DPM-16
Frit	5 mL, 25 mL	18 mm	321035	209114	203042
Frit for Foam Buster	5 mL, 25 mL	18 mm	321475	—	—
Needle	5 mL, 25 mL	18 mm	321699 ⁶	227371 ⁶	232348⁶
Needle for Foam Buster	25 mL	18 mm	321700 ⁶	—	—
Disposable	10 mL	18 mm	—	227371 ⁶	232348 ⁶

⁶ Side hole

Standard instrument configuration in bold print.

Needle PN	Needle Length with Fittings
203042	19.6 cm
209114	22.9 cm
227371	22.9 cm
232348	19.5 cm
321035	25.4 cm (10")
321475	25.4 cm (10")
321699	25.1 cm (9.875")
321700	25.1 cm (9.875")

GC Detectors Replacement Parts and Supplies

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Photoionization Detector (PID) Replacement Parts and Supplies

Cables–PID

Product	Size	Unit	PN
Analog signal cable, 0–1 V for Agilent 5890		each	185850
Analog signal cable, 0–10 V for Agilent 6890		each	252551
Connector assembly for Agilent 5890 electrometer		each	193797
Connector assembly for Agilent 6890 electrometer		each	252379
Electrometer cable for Agilent 5890	3.7"	each	206094
Electrometer cable for Agilent 5890/6890	14.0"	each	206102
Electrometer cable for Agilent 6890	5.0"	each	252544
Electrometer cable for Agilent 5890/6890	6.5"	each	206110
External events cable for Agilent 6890		each	252569
Lamp high voltage cable		each	181750
Power cord, 110 VAC		each	116038
Remote start lamp cable, Model 4430		each	185843
Vent valve cable, Model 4430		each	187476
Vent valve cable, Model 4430, from PN 187476 to Agilent 5890		each	185967

Ferrules and Fittings–PID

Product	Size	Unit	PN
Brass ferrule	1/16" tube	6/pk	223776
Brass tube ferrule back	1/16" tube	5/pk	196162
Brass tube ferrule front	1/16" tube	5/pk	196170
Brass tube ferrule set	1/8"	10/pk	196089
Graphite ferrule	1/16"	10/pk	204693
Graphite ferrule	1/16" x 0.8 mm	10/pk	196097
Graphite tube ferrule	1/8" x 1/16"	5/pk	196196
Graphite/Vespel ferrule	1/4"	10/pk	222794
Graphite/Vespel ferrule	1/16" x 0.8 mm	10/pk	196105

Ferrules and Fittings–PID

Product	Size	Unit	PN
Graphite/Vespel ferrule	1/16" x 0.5 mm	10/pk	196113
Graphite/Vespel ferrule	1/16" x 0.4 mm	10/pk	208330
Nut for outlet restrictor, stainless steel		each	188490
Nut, female, stainless steel	1/4"	each	169682
Nut, male, brass, nickel-plated	1/16"	5/pk	196303
Nut, male, stainless steel	1/16"	each	223057
Nut, male, stainless steel	1/16"	5/pk	196311
Stainless steel ferrule	1/16"	5/pk	196246

Lamp Supplies–PID

Product	Unit	PN
Lamp, 9.6 eV	each	189423
Lamp, 10.0 eV	each	181180
Lamp, 11.8 eV	each	189431
Lamp polishing kit	each	214924
Lamp sealing O-ring	5/pk	255679
Lamp sealing spring	each	180901
Lamp sealing washer	each	188417
Lamp support ring	each	180919
Tower assembly	each	181867

Tubing–PID

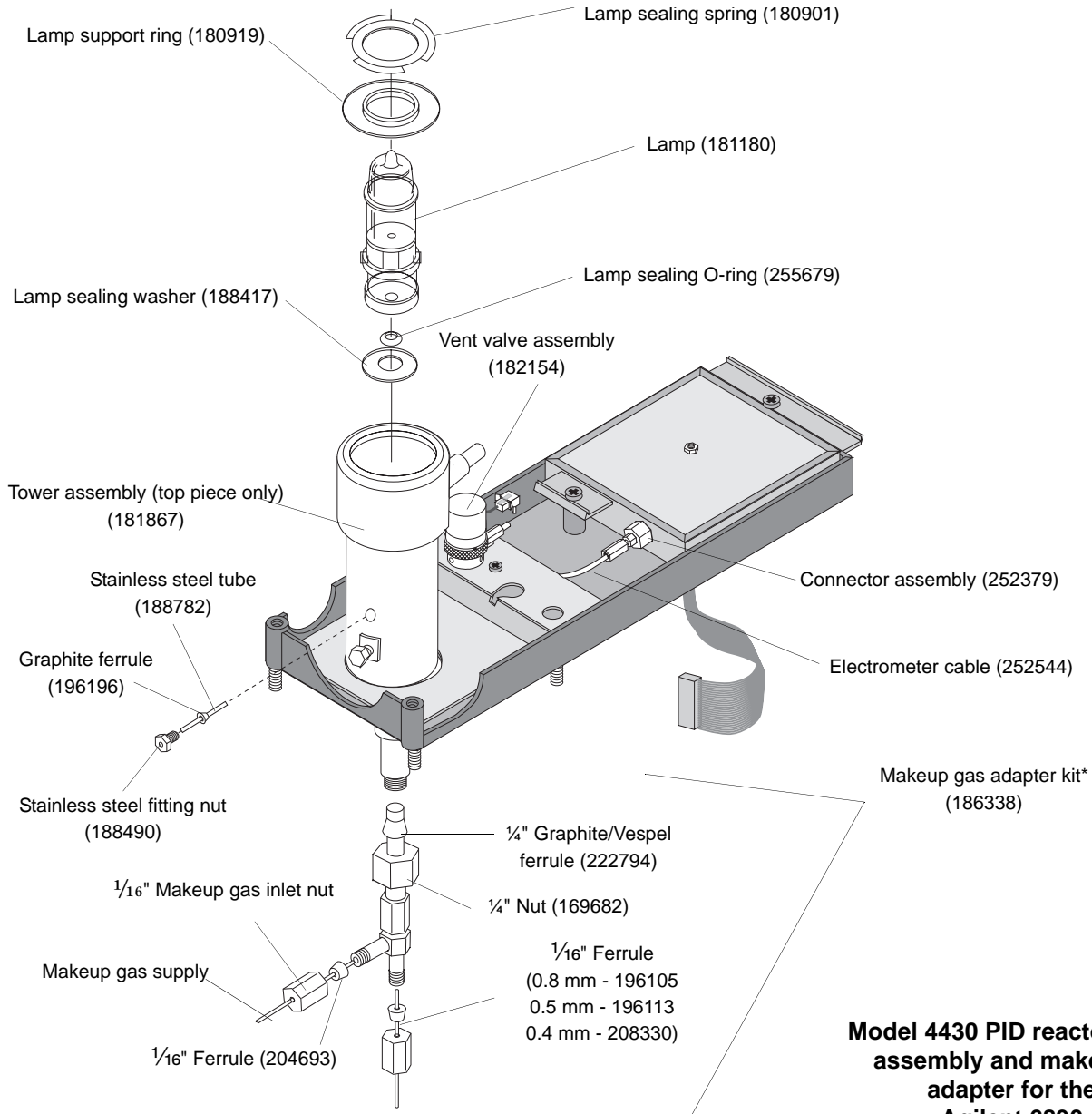
Product	Size	Unit	PN
Copper tubing	1/8" x 0.070" I.D.	foot	111427
Outlet restrictor tube, stainless steel		each	188482
Stainless steel tubing	1/16" x 0.020" I.D.	foot	111732

Vent Supplies–PID

Product	Unit	PN
Two-way vent valve, brass/nickel, 24 VAC	each	183939
Vent outlet tube assembly for Agilent 5890	each	181826

Vent Supplies–PID

Product	Unit	PN
Vent outlet tube assembly for Agilent 6890)	each	252510
Vent valve assembly, 24 V, for Agilent, Varian, Shimadzu	each	182154
Vent valve needle valve	each	195461



Model 4430 PID reactor base assembly and make gas adapter for the Agilent 6890

*Kit includes all parts as indicated except the 1/4" nut PN 169682.

Electrolytic Conductivity Detector (ELCD) Replacement Parts and Supplies

Cables–ELCD

5320	5220	Product	Unit	PN
	■	Cell to reactor interface cable	each	216010
▲		Detector controller to cell interface cable	each	247007
▲		External events cable for Agilent 6890	each	252569
	■	Reactor power cable	each	231365
▲		Reactor power cable	each	245506
	■	Remote start cable	each	229658
▲		Signal out cable 5320 to Agilent 5890 AIB	each	246371
▲		Signal out cable 5320 to Agilent 6890 AIB	each	246389
▲		Signal out cable 5320 to Agilent integrator	each	246397
▲		Signal out cable 5320 to spades	each	246405
	■	Signal out cable, BNC to Agilent 5890 AIB	each	229641
	■	Signal out cable, BNC to Agilent 6890 AIB	each	274852
	■	Signal out cable, BNC to Agilent integrator	each	229633
	■	Signal out cable, BNC to spades	each	215962
	■	Vent valve cable for Model 5220	each	214890
▲		Vent valve cable for Model 5320 and Agilent 5890	each	242062
▲		Vent valve cable for Model 5320 and Agilent 6890/Varian 3400	each	187476

Ferrules–ELCD

5320	5220	Product	Size	Unit	PN
	■	Brass tube ferrule set	1/8" tube	10/pk	196089
▲	■	Graphite/Vespel ferrule	1/16" x 0.8 mm	10/pk	196105
▲	■	Graphite/Vespel ferrule	1/16" x 0.5 mm	10/pk	196113
▲	■	Graphite/Vespel ferrule	1/16" x 0.4 mm	10/pk	208330
▲	■	Graphite/Vespel ferrule	1/16" tube	10/pk	216366
	■	Graphite/Vespel tube ferrule	1/32" x 0.5 mm	6/pk	255794
	■	Graphite/Vespel tube ferrule	1/32" x 0.4 mm	1/pk	236505
	■	Graphite/Vespel tube ferrule	1/32" x 0.8 mm	6/pk	255786
▲	■	Stainless steel ferrule	1/16" tube	5/pk	196246
▲	■	Teflon ferrule	1/16" tube	5/pk	272443

Ferrules–ELCD

5320	5220	Product	Size	Unit	PN
▲	■	Brass ferrule	1/16" tube	6/pk	223776
▲	■	Brass tube ferrule back	1/16" tube	5/pk	196162
▲	■	Brass tube ferrule front	1/16" tube	5/pk	196170

GC Detector Replacement Parts and Supplies

Fittings–ELCD

5320	5220	Product	Size	Unit	PN
▲	■	Knurled nut, female, stainless steel	1/16"	each	226357
	■	Knurled nut, male, stainless steel	1/32"	each	226365
▲	■	Knurled nut, male, stainless steel	1/16"	each	217240
	■	Nut, male, stainless steel	1/4"	each	178574
	■	Reactor assembly nut		each	272369
▲		Reactor base adapter nut		each	223743
▲	■	Reactor top nut, stainless steel	1/16"	each	227462
▲	■	Reactor top union assembly	1/16"	each	226464
▲	■	Union, female, stainless steel, w/ internal filter	1/16" tube	each	204735

Miscellaneous Parts–ELCD

5320	5220	Product	Unit	PN
▲	■	Analog input board for Agilent 6890	each	274886
	■	Cell amplifier board for Model 5220	each	259416
▲		Cell amplifier board for Model 5320	each	274266
▲	■	Cell assembly	each	234237
	■	Cell interface board for Model 5220	each	223222
▲		Controller board for Model 5300	each	266833
	■	CPU board for Model 5220	each	230565
	■	Fan assembly for Model 5200 Controller	each	216952
▲		Fan assembly for Model 5300 Controller	each	245712
	■	Model 5220 ELCD for Agilent operator's manual	each	224923
	■	Model 5220 ELCD for Varian operator's manual	each	255778

Miscellaneous Parts–ELCD

5320	5220	Product	Unit	PN
▲		Model 5320 ELCD for Agilent 5890 operator's manual	each	274969
▲		Model 5320 ELCD for Agilent 6890 operator's manual	each	278846
▲		Model 5320 ELCD for Varian operator's manual	each	307306
▲	■	Nut driver tool	each	223917

Mode Kits–ELCD

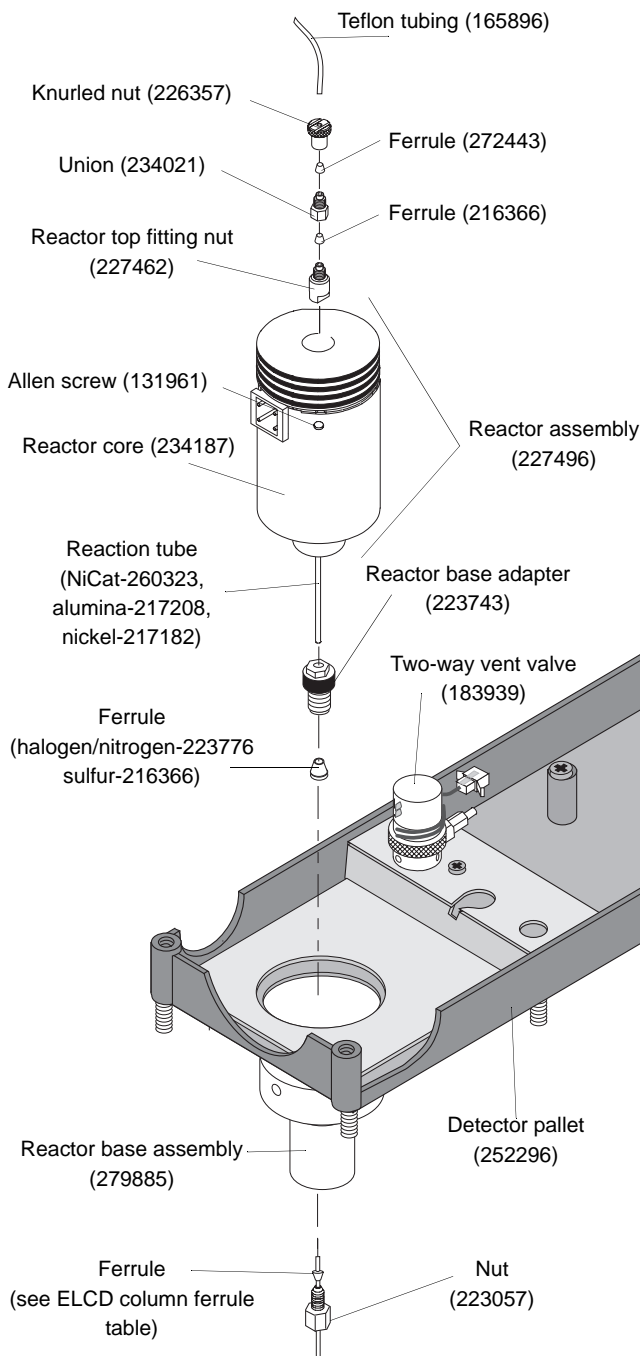
5320	5220	Product	Unit	PN
▲	■	Halogen mode kit	each	219402
▲	■	Nitrogen mode kit	each	224972
▲	■	Sulfur mode kit	each	224980

Reactor Assembly Parts–ELCD

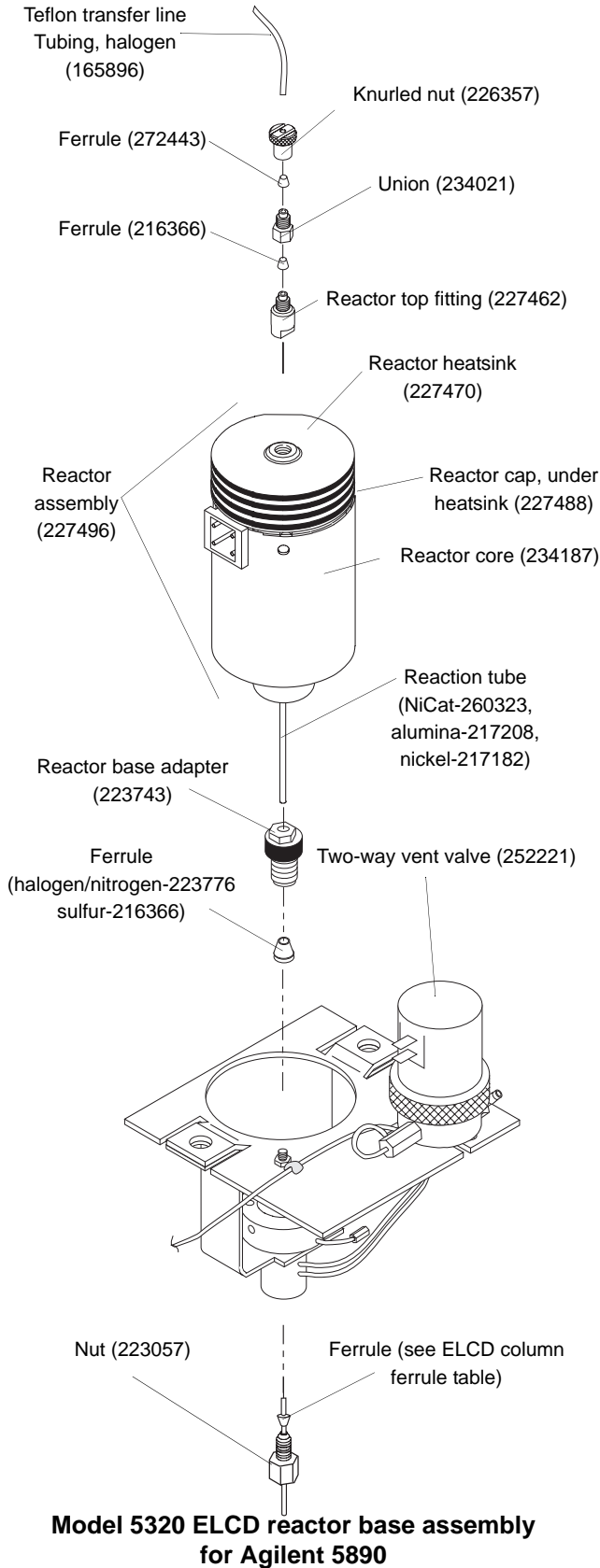
5320	5220	Product	Size	Unit	PN
▲	■	Allen screw set	6-32, 1/8"	each	131961
▲	■	Alumina reaction tube for S mode		3/pk	217208
▲	■	Ferrule, brass for H and N modes	1/16" tube	6/pk	223776
▲	■	Ferrule, graphite/Vespel	1/32" tube	6/pk	255786
▲		Ferrule, graphite/Vespel	1/16" x 0.8 mm I.D.	10/pk	196105
▲		Ferrule, graphite/Vespel	1/16" x 0.5 mm I.D.	10/pk	196113
▲		Ferrule, graphite/Vespel	1/16" x 0.4 mm I.D.	10/pk	208330
▲	■	Ferrule, graphite/Vespel for S mode	1/16" tube	10/pk	216366
▲	■	Ferrule, Teflon	1/16" tube	5/pk	272443
▲	■	Knurled nut, female, stainless steel	1/16"	each	226357

Reactor Assembly Parts—ELCD

5320	5220	Product	Size	Unit	PN
	■	Knurled nut, male, stainless steel	1/32"	each	226365
▲	■	NiCat reaction tube for halogens	3.45"	12/pk	260323
▲	■	Nickel reaction tube for nitrogen or fluorinated byproducts		6/pk	217182
▲		Nut, male, stainless steel	1/16"	each	223057
▲	■	Reactor assembly		each	227496
▲	■	Reactor base adapter		each	223743
	■	Reactor base nut	1/16"	each	272369
▲	■	Reactor base seal, graphite/Meldin		each	223933
▲	■	Reactor core		each	234187
▲	■	Reactor top fitting nut, stainless steel	1/16"	each	227462
▲	■	Teflon tubing	1/16" x 0.020 mm I.D.	foot	165896
	■	Three-way vent valve, brass/nickel, 12 V		each	179325
▲		Two-way vent valve, brass/nickel, 12 V for Agilent 5890		each	252221
▲		Two-way vent valve, brass/nickel, 24 V for Agilent 6890		each	183939
▲	■	Union, male-female, tapered, stainless steel	1/16"	each	234021
▲	■	Vent valve restrictor element		each	232173

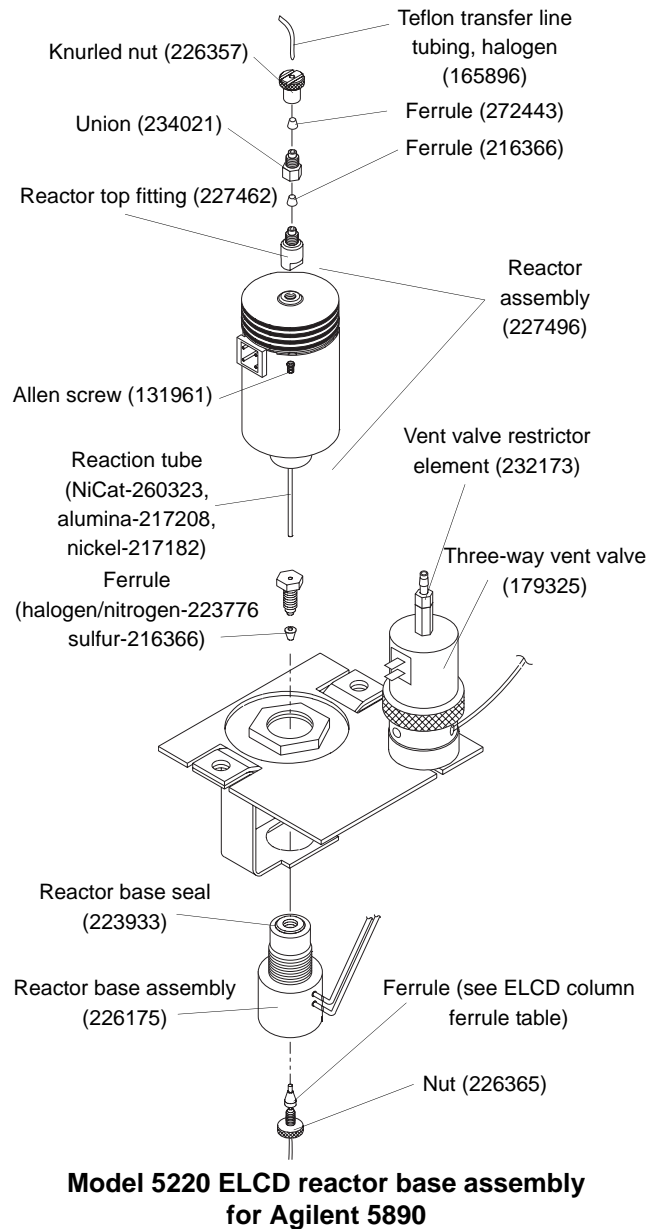


Model 5320 ELCD reactor base assembly for Agilent 6890



ELCD Column Ferrule Table

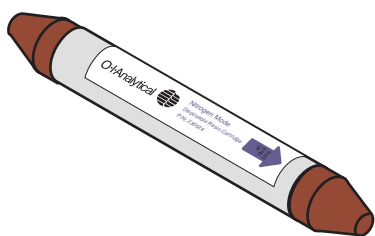
Base	Column	Ferrule I.D.	PN
1/32"	0.53	0.8 mm	255786
1/32"	0.32	0.5 mm	255794
1/32"	<0.32	0.4 mm	236505
1/16"	0.53	0.8 mm	196105
1/16"	0.32	0.5 mm	196113
1/32"	<0.32	0.4 mm	208330
1/6"	packed	—	—
1/4"	packed	—	—



GC Detector Replacement Parts and Supplies

Resin Cartridges–ELCD

5320	5220	Product	Unit	PN
▲	■	Disposable resin cartridge for halogen mode	each	213579
▲	■	Disposable resin cartridge for nitrogen mode	each	230524
▲	■	Disposable resin cartridge for sulfur mode	each	225003



Disposable resin cartridge

Scrubber Parts–ELCD

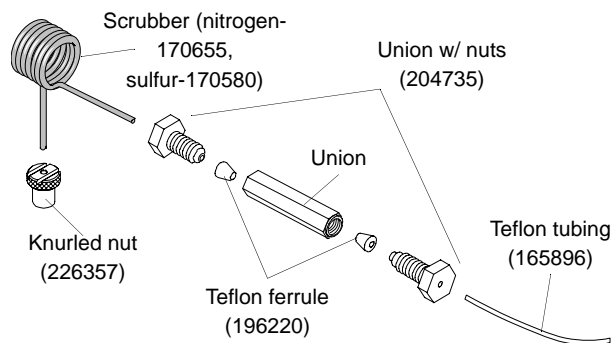
5320	5220	Product	Size	Unit	PN
▲	■	Ferrule, Teflon	1/16" tube	5/pk	196220
▲	■	Knurled nut, female, stainless steel for reactor	1/16"	each	226357
▲	■	Nitrogen mode scrubber		each	170655
▲	■	Sulfur mode scrubber		each	170580
▲	■	Tubing, PEEK for N and S modes	1/16" x 0.020 mm I.D.	each	197194
▲	■	Union, female w/ nuts, stainless steel, w/ internal filter	1/16" tube	each	204735

Solvent System Parts–ELCD

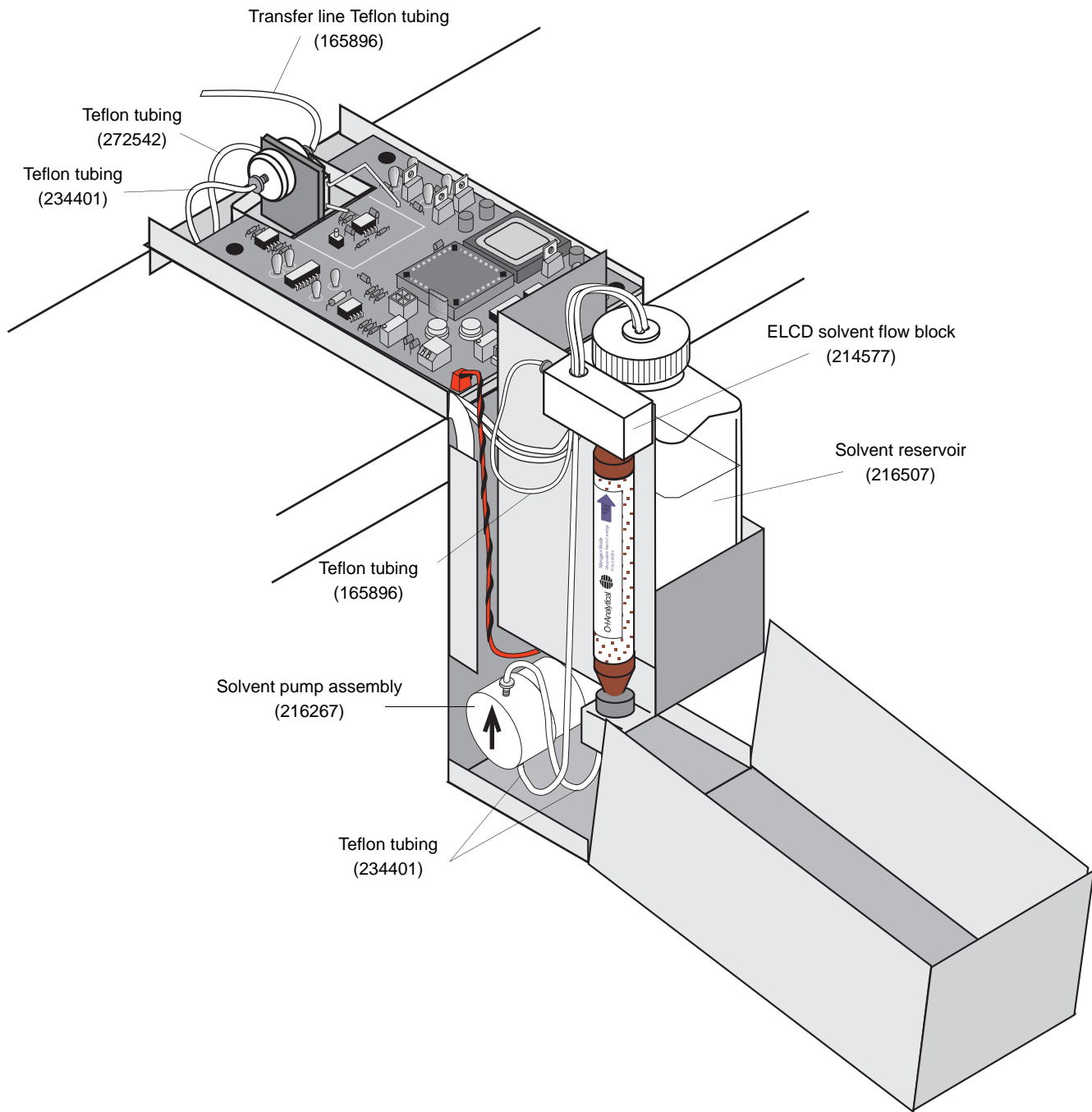
5320	5220	Product	Unit	PN
▲	■	120-Pitch gear pump rebuild kit	each	298851
▲	■	Filter assembly	each	230953
▲	■	Solvent flow block	each	214577
▲	■	Solvent pump assembly	each	216267
▲	■	Solvent reservoir, 500 mL	each	216507

Tubing–ELCD

5320	5220	Product	Size	Unit	PN
▲	■	PEEK tubing	1/16" x 0.030" I.D.	foot	197202
▲	■	Silicone tubing, clear	1/4" x 1/8" I.D.	foot	179085
▲	■	Stainless steel tubing	1/16" x 0.030" I.D.	inch	193409
▲	■	Teflon tubing	1/16" x 0.007" I.D.	foot	272542
▲	■	Teflon tubing	1/16" x 0.020" I.D.	foot	165896
▲	■	Teflon tubing	1/16" x 0.031" I.D.	foot	145591
▲	■	Teflon tubing	1/16" x 0.38" I.D.	foot	234401



Scrubber assembly



Model 5320 solvent assembly

Halogen Specific Detector (XSD) Replacement Parts and Supplies

Adapters and Miscellaneous Parts–XSD

Product	Unit	PN
Flow measurement adapter for Model 5360	each	245779
Flow measurement adapter for Model 5360A	each	319631
Jet removal tool	each	246132
5360 Venting option for Agilent 5890	each	246074
5360A Venting option for Agilent 6890	each	319514
5360 Venting option for Shimadzu 17A	each	290635
XSD operator's manual for Agilent 5890	each	246140
XSD operator's manual for Agilent 6890	each	319759
XSD operator's manual for Varian	each	307322

Cables–XSD

Product	Unit	PN
Dual vent valve cable (also requires PN 252569)	each	264234
External events cable for Agilent 6890 (also requires PN 264234)	each	252569
Heater/sensor for Model 5360A and Agilent 6890	each	252429
Reactor to controller power cable	each	245506
Signal probe to controller cable	each	245415
Vent valve power cable for Agilent 5890/Shimadzu	each	185967

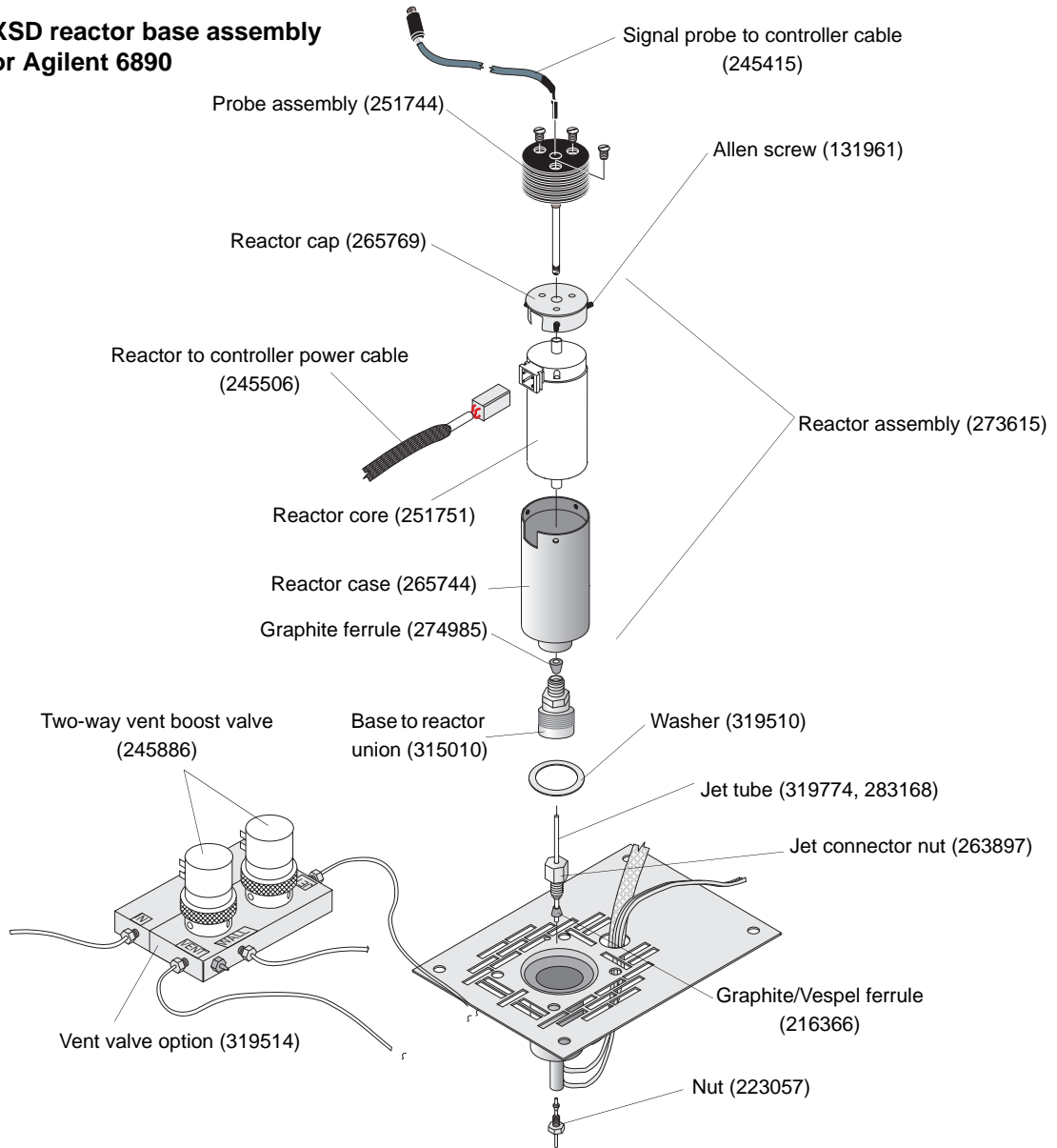
Detector Assembly Parts (see drawing)–XSD

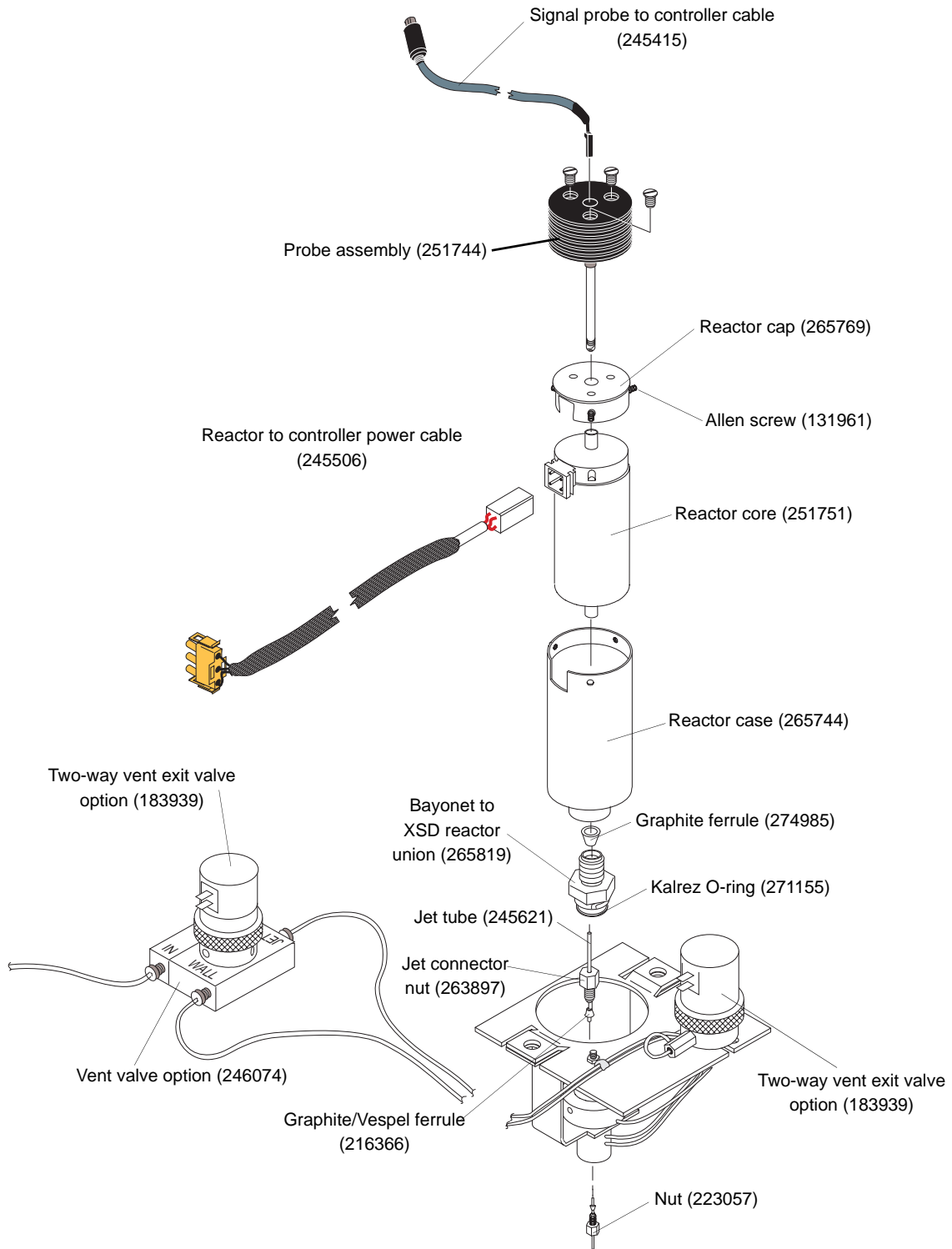
Product	Size	Unit	PN
Allen screw set	6-32, 1/8"	each	131961
Base to reactor union for Model 5360A		each	315010
Bayonet to XSD reactor union for Model 5360		each	265819
Bracket base assembly for Agilent 5890		each	265827
Bracket base assembly for Agilent 6890		each	280735
Bracket base assembly for Shimadzu 17		each	290627
Bracket base assembly for Varian 3400/3600		each	278861
Ferrule, graphite	1/4" tube	10/pk	274985
Ferrule, graphite/Vespel	1/16" tube	10/pk	216366
Ferrule, graphite/Vespel	1/16" x 0.3 mm I.D.	10/pk	218644
Ferrule, graphite/Vespel	1/16" x 0.4 mm I.D.	10/pk	208330
Ferrule, graphite/Vespel	1/16" x 0.5 mm I.D.	10/pk	196113
Ferrule, graphite/Vespel	1/16" x 0.8 mm I.D.	10/pk	196105
Jet connector nut	5/16"		263897
Jet tube, glass lined for Model 5360	1/16"	each	245621
Jet tube, nonventing for Model 5360A		each	319774
Jet tube, venting for Model 5360A		each	283168
Nut, male, stainless steel	1/16"	each	223057
O-ring, Kalrez®, 5360		each	271155
Probe assembly		each	251744
Reactor assembly (includes reactor cap, case, and core)		each	273615
Reactor cap		each	265769
Reactor case		each	265744
Reactor core		each	251751
Two-way vent boost valve, brass/nickel, 24 V, 5360A		each	245886
Two-way vent exit valve, brass/nickel, 24 V, 5360		each	183939

Detector Assembly Parts (see drawing)–XSD

Product	Size	Unit	PN
Vent valve option for Model 5360		each	246074
Vent valve option for Model 5360A		each	319514
Washer, aluminum, 5360A	0.695 x 0.566 x 0.032	each	319510

Model 5360A XSD reactor base assembly for Agilent 6890

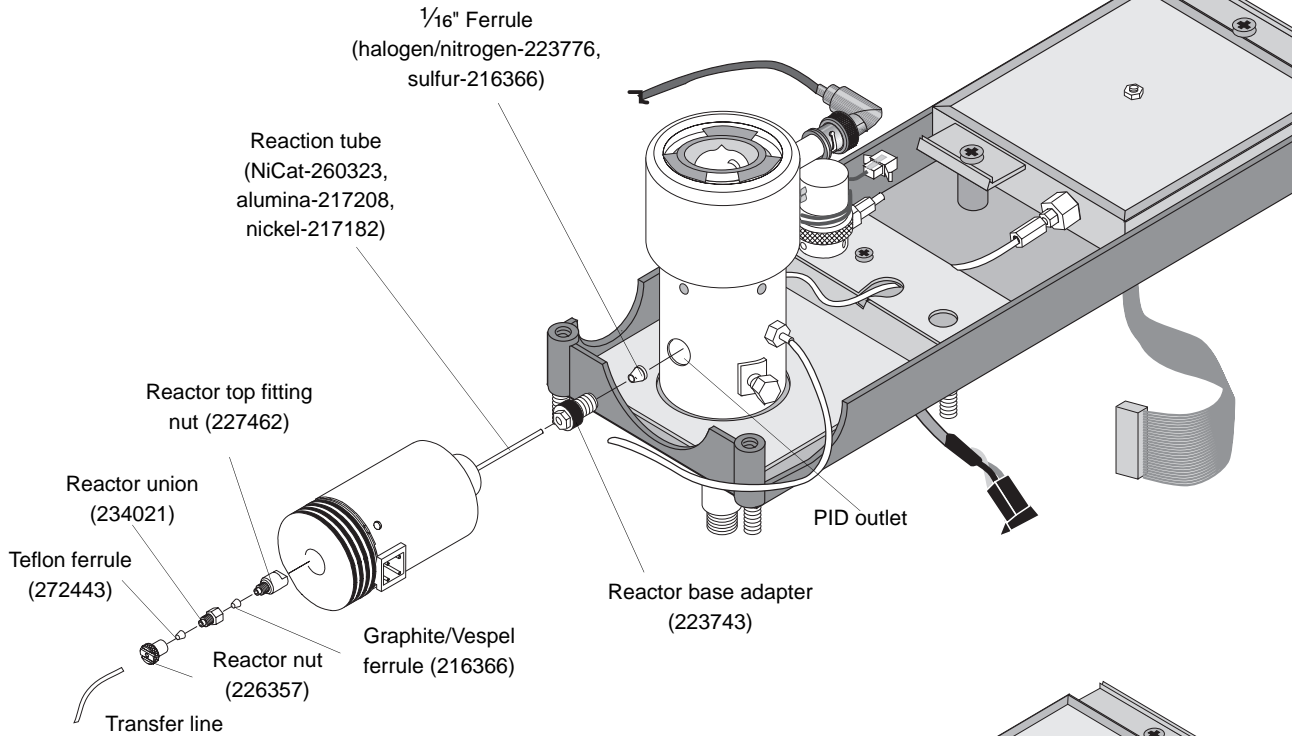




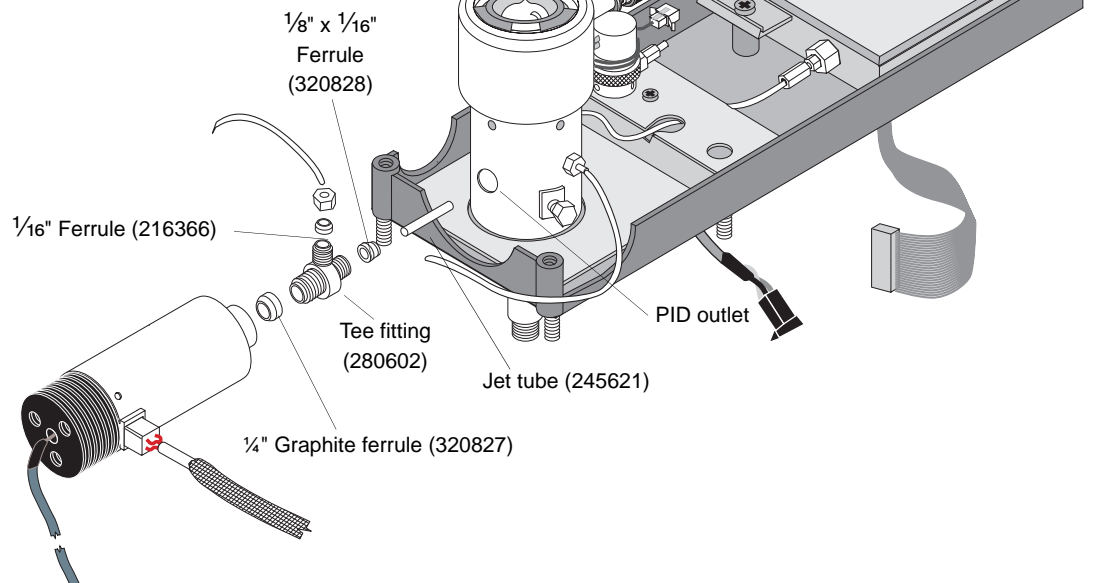
XSD reactor base assembly for Agilent 5890

Tandem PID/ELCD and Tandem PID/XSD Replacement Parts and Supplies

Tandem PID/ELCD



Tandem PID/XSD



Pulsed Flame Photometric Detector (PFPD) Replacement Parts and Supplies

Cables–PFPD

Product	Unit	PN
Analog out signal cable for Agilent 6890	each	252551
Dual remote start Y-cable	each	322236
External event cable for Agilent 6890	each	252569
Handshake cable for Agilent 5890	each	185868
Heater assembly cable for Agilent 5890	each	178954
Heater/thermocouple assembly cable for Agilent 6890	each	252429
Heater assembly cable for Shimadzu 17A, 110 V	each	244814
Heater assembly cable for Shimadzu 17A, 240 V	each	299933
Heater assembly cable for Trace 2000, 110 V	each	319817
Heater assembly cable for Trace 2000, 220/240 V	each	320383
Ignitor assembly cable	each	282624
PFPD remote start cable for Agilent 6890 and 5890	each	288902
PFPD remote start cable for Shimadzu 17A	each	288977
Power cord for North America, 110 V	each	116038
RS-232 9-pin to 9-pin serial cable for WinPulse software, 10 ft	each	226621
RS-232 9-pin to 9-pin serial cable for WinPulse software, 25 ft	each	316893
Signal output cable to Agilent 5890 AIB	each	229641
Signal output cable to Agilent 6890 AIB	each	274852
Signal output cable to Agilent integrator	each	229633
Signal output cable to spade lugs	each	215962
Temperature sensor assembly cable for Agilent 5890	each	170093
Temperature sensor assembly cable for Trace 2000	each	319816

Ferrules–PFPD

Product	Size	Unit	PN
Graphite/Vespel ferrule	1/16" plug	10/pk	197079
Graphite/Vespel ferrule	1/16" x 0.4 mm tube	10/pk	208330
Graphite/Vespel ferrule	1/16" x 0.3 mm tube	10/pk	218644
Graphite/Vespel ferrule	1/16" x 0.5 mm tube	10/pk	196113
Graphite/Vespel ferrule	1/16" x 0.8 mm tube	10/pk	196105
Graphite/Vespel ferrule	1/16" x 1/16" tube	10/pk	216366
Stainless steel ferrule	1/8" tube	each	112441

Fittings–PFPD

Product	Size	Unit	PN
Barbed hose adapter	10-32 x 1/16"	each	202077
Column nut fitting	1/16"	each	223057
Nut fitting, male, stainless steel	1/8"	each	112458
Tee fitting, male	1/16"	each	282509

Gas Flow Control–PFPD

Product	Unit	PN
Air gas flow controller, 60 mL	each	282475
AUX EPC gas flow module for Agilent 6890	each	275974
Gas flow module kit, PFPD for Agilent 6890 (use w/PN 275974)	each	286344
Hydrogen gas flow controller, 25 mL	each	282483
Needle valve, Nupro®	each	282491
OIM EPC gas flow module for Agilent 6850*	each	312595
OIM EPC gas flow module for Agilent 6890	each	312678

*Requires PN 285049.

GC Detector Replacement Parts and Supplies

Miscellaneous Parts–PFPD

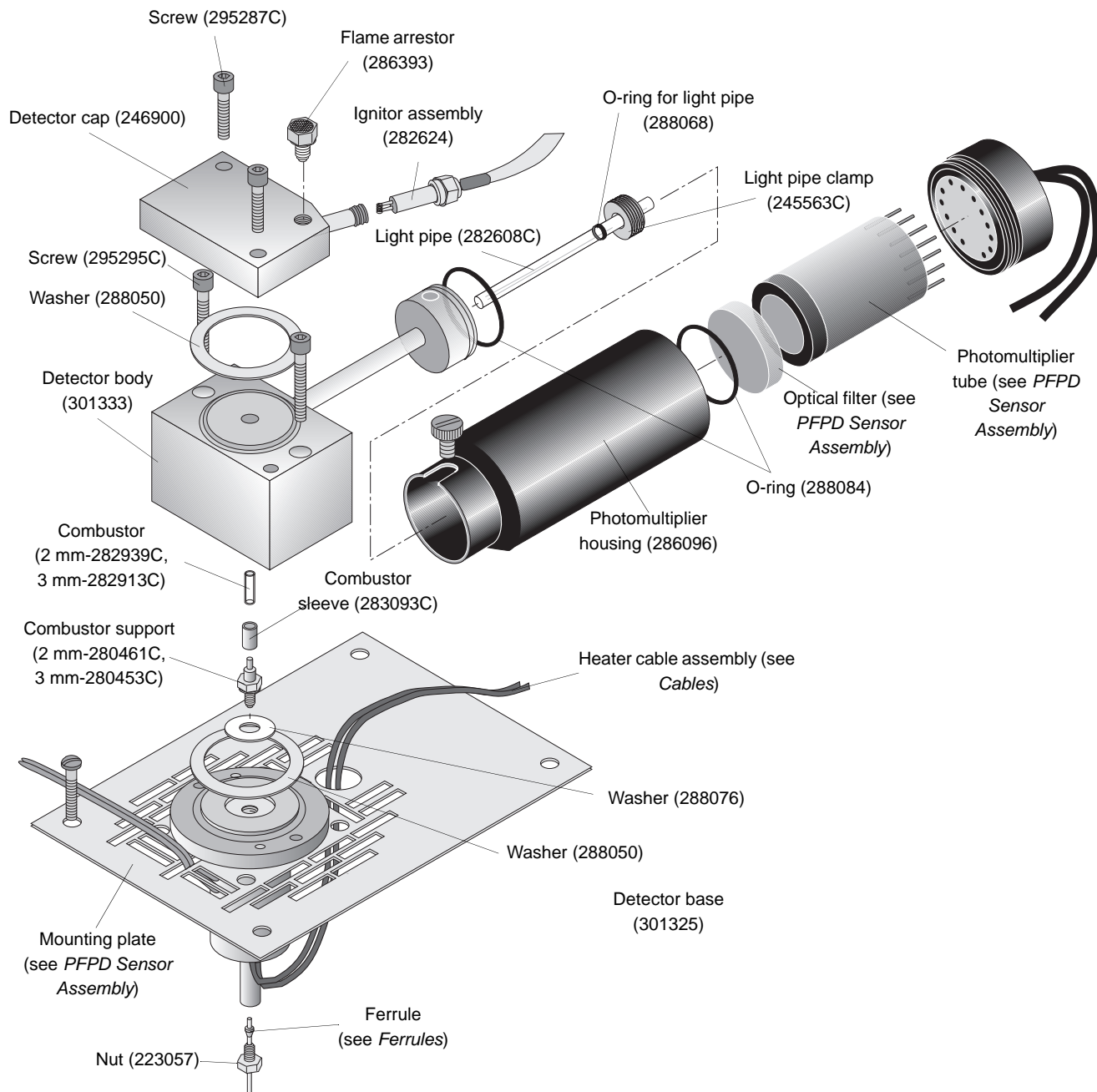
Product	Unit	PN
Allen wrench	each	284539
Column positioning tool	each	318949
Combustor extractor tool, 2 mm	each	280719
Combustor extractor tool, 3 mm	each	280727
Dimethyl disulfide permeation tube	each	290452
Dimethyl methyl phosphonate permeation tube	each	290460
Fuse, 1.25 amp, Slo-Blo	each	298984
Green LED w/ cable	each	284414
PFPD operator's manual	each	283101
PFPDView software	each	312330
Phosphorus permeation device kit w/ permeation tube	each	290429
Red LED w/ cable	each	245894
Sulfur permeation device kit w/ permeation tube	each	290411
Teflon-coated forceps	each	283051
WinPulse software	each	286302

PFPD Sensor Assembly

Product	Size	Unit	PN
Combustor	2 mm	each	282939C
Combustor	3 mm	each	282913C
Combustor kit	3 mm	each	282905
Combustor sleeve		each	283093C
Combustor support	2 mm	each	280461C
Combustor support	3 mm	each	280453C
Combustor support washer, aluminum	0.395"	10/pk	288076
Detector base service kit		each	301325
Detector body service kit		each	301333
Detector cap		each	246900
Flame arrestor		each	286393
Light pipe		each	282608C
Light pipe clamp		each	245563C
Mounting plate for Agilent 5890		each	245464
Mounting plate for Agilent 6890		each	280735
Mounting plate for Shimadzu 17A		each	285916
Mounting plate for Trace 2000		each	319809

PFPD Sensor Assembly

Product	Size	Unit	PN
Optical filter, BG-12, purple		each	282947
Optical filter, BG-3		each	302919
Optical filter, BG-39, blue		each	290015
Optical filter, GG-495, yellow		each	282921
Optical filter, RG-695, black		each	290007
Optical filter, UV-34, clear		each	310623
O-ring for light pipe, Viton	0.156"	5/pk	288068
O-ring, Viton, for PMT housing	0.926"	5/pk	288084
Photomultiplier housing assembly		each	286096
Photomultiplier thumbscrew	6-32 x 1/4"	each	177065
Photomultiplier tube, R1924 (standard)		each	284364
Photomultiplier tube, R1925		each	290049
Photomultiplier tube, R5070		each	290106
Screw	6-32 x 1"	each	295295C
Screw	6-32 x 3/4"	each	295287C
Screw	6-32 x 1/4"	each	295279C
Screw		each	252585
Screw, stainless steel	M4-0.7 x 8 mm	each	169963
Screw, Torx	M4 x 10 mm	each	252585
Washer, aluminum	1"	10/pk	288050



Model 5380 PFPD detector assembly

Flame-Ionization Detector (FID) Replacement Parts and Supplies

Model 4410 FID Assembly Parts

Product	Size	Unit	PN
Adapter, brass/nickel	1/16" tube	5/pk	196352
Allen screw set	6-32, 1/8"	each	131961
Base O-ring, Viton		5/pk	210278
Coaxial cable connector		each	191791
Coaxial electrometer cable	6.5"	each	206110
Coaxial electrometer cable	9"	each	285908
Collector electrode		each	191825
Ferrule, back, brass	1/16" tube	5/pk	196162
Ferrule, front, brass	1/16" tube	5/pk	196170
Ferrule, graphite	1/8" x 1/16" tube	5/pk	196196
FID base		each	191767
FID body casing		each	191759
Flame jet	1/16" O.D. x 0.3 mm I.D.	each	191817
Gas module to ignitor cable		each	191916
Gasket, BUNA	0.297 x 0.125 x 0.020"	each	308882
Glow plug assembly cable (ignitor pigtail cable)		each	191833
Lock washer, stainless steel	#2	each	134080
Lower FID body ferrule, Vespel		each	191783
Nut, male, brass/nickel	1/16"	5/pk	196303
Screw, stainless steel	2-56, 3/16"	each	144361
Upper FID body ferrule, Vespel		each	191775

Model 4410 FID Miscellaneous Parts

Product	Unit	PN
Analog signal cable (0-1 V), 5890	each	185850
Analog signal cable, 6890	each	252551
Detector standard, 100 ppm	each	222919
Electrometer connector assembly for Agilent 5890	each	193797
Electrometer connector assembly for Agilent 5890	each	252379
Ignitor power cable for Agilent 5890	each	191866
Ignitor power cable for Agilent 6890	each	279703
Manifold O-ring, Viton	12/pk	185116
Model 4410 FID operator's manual	each	192229
Model 4410 FID subassembly	each	191742
PID/FID gas module kit, two line for Agilent 5890	each	192013
Tube, copper, 1/8" x 0.070 mm I.D.	each	111427

Model 4415 FID Assembly Parts

Product	Size	Unit	PN
Adapter, brass/nickel	1/16" tube	5/pk	196352
Allen screw set	8-32 x 1/4"	each	199950
Bias voltage cable for Shimadzu 17A		each	284620
BNC connector assembly		each	283267
BNC to BNC electrometer cable		each	284646
Cable, analog for Varian 3400/3600		each	193235
Collector electrode		each	246751
Collector insulator		each	246744
Curved spring washer		each	283176
Ferrule, back, brass	1/16" tube	5/pk	196162
Ferrule, front, brass	1/16" tube	5/pk	196170
FID base fitting		each	246728
FID base O-ring, silicone	0.364 x 0.70	each	283218
FID body casing		each	246736

GC Detector Replacement Parts and Supplies

Model 4415 FID Assembly Parts

Product	Size	Unit	PN
FID jet	0.3 mm I.D.	each	283168
FID jet ferrule, Vespel		each	283150
Ignitor cable for Shimadzu 17A		each	284638
Ignitor/bias cable for Varian		each	283283
Nut fitting, male, brass/nickel	1/16"	5/pk	196303
O-ring, silicone		5/pk	217760
Retaining ring, stainless steel		each	283192
Tubing, copper	1/8 x 0.070 I.D.	foot	111427
Tubing, stainless steel	1/16" x 0.020"	foot	111732

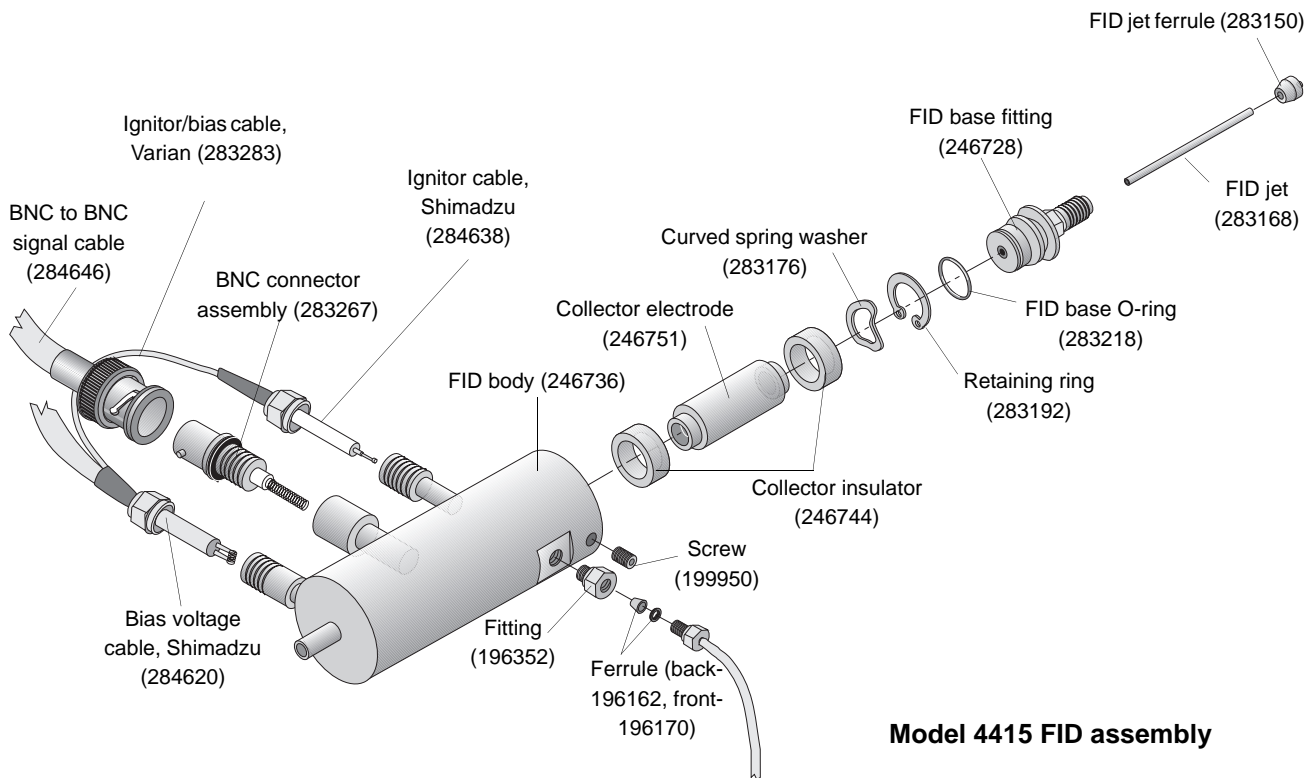
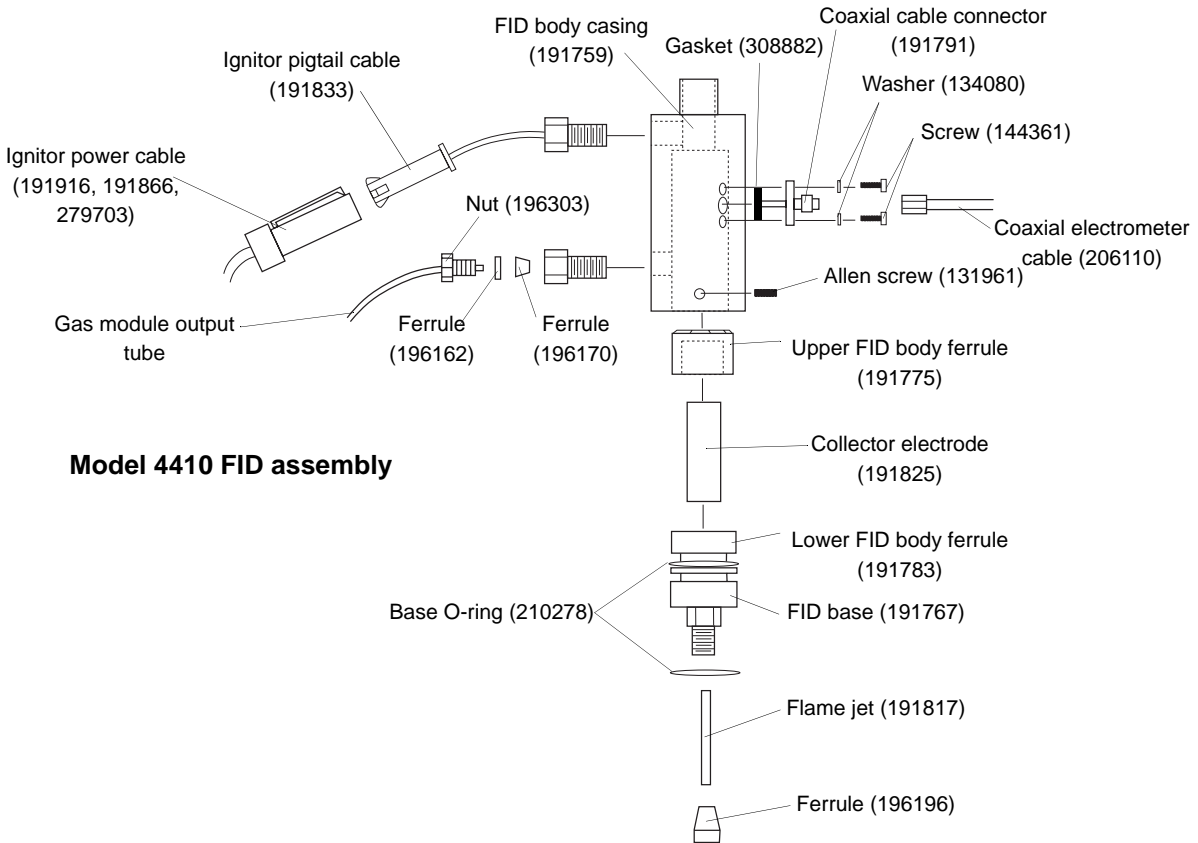
Model 4415 FID Miscellaneous Parts

Product	Unit	PN
Allen wrench, 5/64"	each	284521
Detector standard, 100 ppm	each	222919
Model 4415 FID operator's manual	each	283242
Model 4415 subassembly	each	283226
Retaining ring pliers	each	283200



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Have a question about our instruments or an application? Call us about onsite specific applications training and hands-on seminars. Call us at our toll-free technical support hotline (800) 336-1711.



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Cleaning Supplies

Product	Unit	PN
Micro all purpose cleaner	each	259945
PID lamp cleaning kit	each	214924

Columns and Column Supplies

Product	Size	Unit	PN
BTEX column kit	30 m x 0.53 mm I.D. x 1.5 µm (Rtx-5); 30 m x 0.53 mm I.D. x 1.5 µm (Stabilwax®) column splitter	each	187765
Column cutter, ceramic		3/pk	206888
Column splitter, stainless steel	0.8 mm	each	193847
DB 624 column	30 m x 0.53 mm I.D. x 3.0 µm	each	203059
DB 624 column	75 m x 0.53 mm I.D. x 3.0 µm	each	203067
DB VRX column	20 m x 0.18 mm I.D. x 1.0 µm	each	320839
DB VRX column	30 m x 0.25 mm I.D. x 1.4 µm	each	320840
DB VRX column	60 m x 0.25 mm I.D. x 1.4 µm	each	319458
DB VRX column	60 m x 0.32 mm I.D. x 1.8 µm	each	316851
DB VRX column	75 m x 0.45 mm I.D. x 2.55 µm	each	259986
GS-GasPro® column	30 m x 0.32 mm	each	319451
GS-GasPro column	60 m x 0.32 mm	each	319452
Pesticide column kit	30 m x 0.32 mm I.D. x 0.25 µm Rtx®-5); 30 m x 0.32 mm I.D. x 0.25 µm (Rtx-35) column fittings	each	192831
Rtx-1 column	105 m x 0.53 mm I.D. x 3.0 µm	each	236240
Rtx-5 column	30 m x 0.32 mm I.D. x 0.25 µm	each	193318
Rtx-5 column	30 m x 0.53 mm I.D. x 1.5 µm	each	188193
Rtx-35 column	30 m x 0.32 mm I.D. x 0.25 µm	each	193326
Rtx-VMS column	20 m x 0.18 mm I.D. x 1.0 µm	each	320842
Rtx-VMS column	30 m x 0.25 mm I.D. x 1.4 µm	each	320841
Stabilwax column	30 m x 0.53 mm I.D. x 1.5 µm	each	188201

Note: OI Analytical reserves the right to substitute columns without notice with exact replacements from other vendors.

Boards

Product	Unit	PN
Analog input board (AIB) for Agilent 6890	each	274886
Analog input board (AIB) for Agilent 5890	each	187716K
Dual channel electrometer	each	194910
Single channel electrometer	each	194720
PID or FID electrometer card for Agilent 6890 (may require PN 274878)	each	274860
PID or FID interface card for Agilent 6890	each	274878
PID or FID electrometer card for Agilent 5890	each	187344

Fuses

Product	Instrument	Unit	PN
0.5 amp fuse, AGC	Model 4430	each	115469
1.25 amp fuse, Slo-Blo®	Model 5380/AMPS	each	298984
2 amp fuse, AGC	Model 4551/5200	each	211441
2 amp fuse, GMA	Model 4551A/1051	each	177453
3 amp fuse, AGC	CFM	each	115519
3.15 amp fuse, Slo-Blo/T	Model 4560/4551/1010/Solids	each	257329
6.3 amp fuse, GDC	Model 4560/Eclipse	each	249177

Gas Flow Modules—Agilent 5890

Product	Unit	PN
Two-line gas flow module for Model 5320 ELCD/ELCD	each	232371
Two-line gas flow module for Model 5350 PID/ELCD	each	187302
Three-line gas flow module for Model 4450 PID/FID	each	192013

Leak Detection

Product	Size	Unit	PN
Leak hunter, portable, detects nonflammable gases		each	258418
Snoop® leak detector	8 oz squirt bottle	each	129767

Gas Flow Modules—Agilent 6890

Product	Unit	PN
PCM (EPC) pneumatics control module kit, inlet	each	285015
OIM EPC gas flow module	each	285049
OIM EPC gas flow module for PFPD	each	312686
Auxiliary EPC flow module	each	275974

Gas Flow Modules—Agilent 5890

Product	Unit	PN
One-line gas flow module for Model 5320 ELCD	each	225037

GC System Replacement Parts and Supplies

Manuals and Guides











Product	Unit	PN
Automated Multipoint Process Sampler (AMPS) operator's manual	each	311761
Cryo-Focusing Module operator's manual	each	202879
DPM-16/MHC-16 operator's manual	each	248393
Dual Channel Electrometer and SCE operator's manual	each	206839
Eclipse Sample Concentrator operator's manual	each	321604
Fluorinated By-Products Analyzer operator's manual	each	301119
Low-Dead-Volume Injector (LDVI) installation/maintenance guide (Agilent 6890)	each	280586
Low-Dead-Volume Injector installation/maintenance guide (Agilent 5890)	each	236414
Model 4410 Flame-Ionization Detector operator's manual	each	192229
Model 4415 Flame-Ionization Detector operator's manual	each	283242
Model 4430 Photoionization Detector operator's manual (Agilent 5890/ Varian 3400)	each	186678
Model 4430 Photoionization Detector operator's manual (Agilent 6890)	each	252320
Model 4430 Photoionization Detector operator's manual (Varian 3800)	each	302943
Model 4551 Autosampler operator's manual	each	235895
Model 4551A Autosampler operator's manual	each	310565
Model 4552 Water/Soil Autosampler operator's manual	each	285007
Model 4560 Sample Concentrator operator's manual	each	227959
Model 5320 Electrolytic Conductivity Detector operator's manual (Agilent 5890)	each	274969
Model 5320 Electrolytic Conductivity Detector operator's manual (Agilent 6890)	each	278846
Model 5320 Electrolytic Conductivity Detector operator's manual (Varian 3400/3800)	each	307306
Model 5360 Halogen Specific Detector operator's manual (Agilent)	each	246140
Model 5360 Halogen Specific Detector operator's manual (Varian)	each	307322
Model 5360A Halogen Specific Detector operator's manual	each	319759
Model 5380 Pulsed Flame Photometric Detector operator's manual	each	283101

Manuals and Guides

Product	Unit	PN
PFPDView operator's manual	each	311019
PT Express operator's manual	each	320538
Standards Addition Module (SAM) installation/maintenance guide	each	284976
WinTrap <i>Plus</i> operator's manual	each	307470

Most manuals are provided electronically as PDF on CD.

Power Cords

Country or Region	Voltage	Unit	PN
Australia 	220/230 VAC	each	249276
China 	220 VAC	each	249276
European continent 	220/230 VAC	each	249284
Greenland 	220 VAC	each	249300
India 	220–250 VAC	each	249318
Ireland 	220 VAC	each	249268
New Zealand 	230 VAC	each	249276
North America 	120 VAC	each	116038
South Africa 	220–250 VAC	each	249318
United Kingdom 	240 VAC	each	249268

Scrubbers

Product	Unit	PN
GC trap, Amborsorb®/carbon molecular sieve (ELCD)	each	196816
Hydrocarbon canister trap, 1/8"	each	197848
Scrubber, in-line molecular sieve	each	258897

Standards

Product	Contents	Unit	PN
BTEX standard	100 ppm in methanol	each	222885
Method 502.2 gas/nongas standard	100 ppm in methanol	each	222901
Method 502.2 standard	100 ppm in methanol	each	222919
Pesticide standard	(γ -BHC, chlorpyrifos, diazinon, lindane, azobenzene, thimet, atrazine)	each	222893

Syringes

Product	Size	Unit	PN
Gas tight syringe	10.0 μ L, 2" needle	each	188003
Syringe	10.0 μ L, 2" needle	each	167545
Syringe	5.0 mL, 2" needle	each	169327
Syringe	10.0 mL, 2" needle	each	169335
Sample syringe w/ Luer-Lok®	25.0 mL		172461
Sample syringe w/ Luer-Lok	5.0 mL	each	177659

Tools

Product	Unit	PN
Ferrule and septum extractor	each	231167
Nut driver, hollow, 1/4"	each	223917
Reamer, small	each	258368
Wrench, 1 1/8" sparge	each	227975

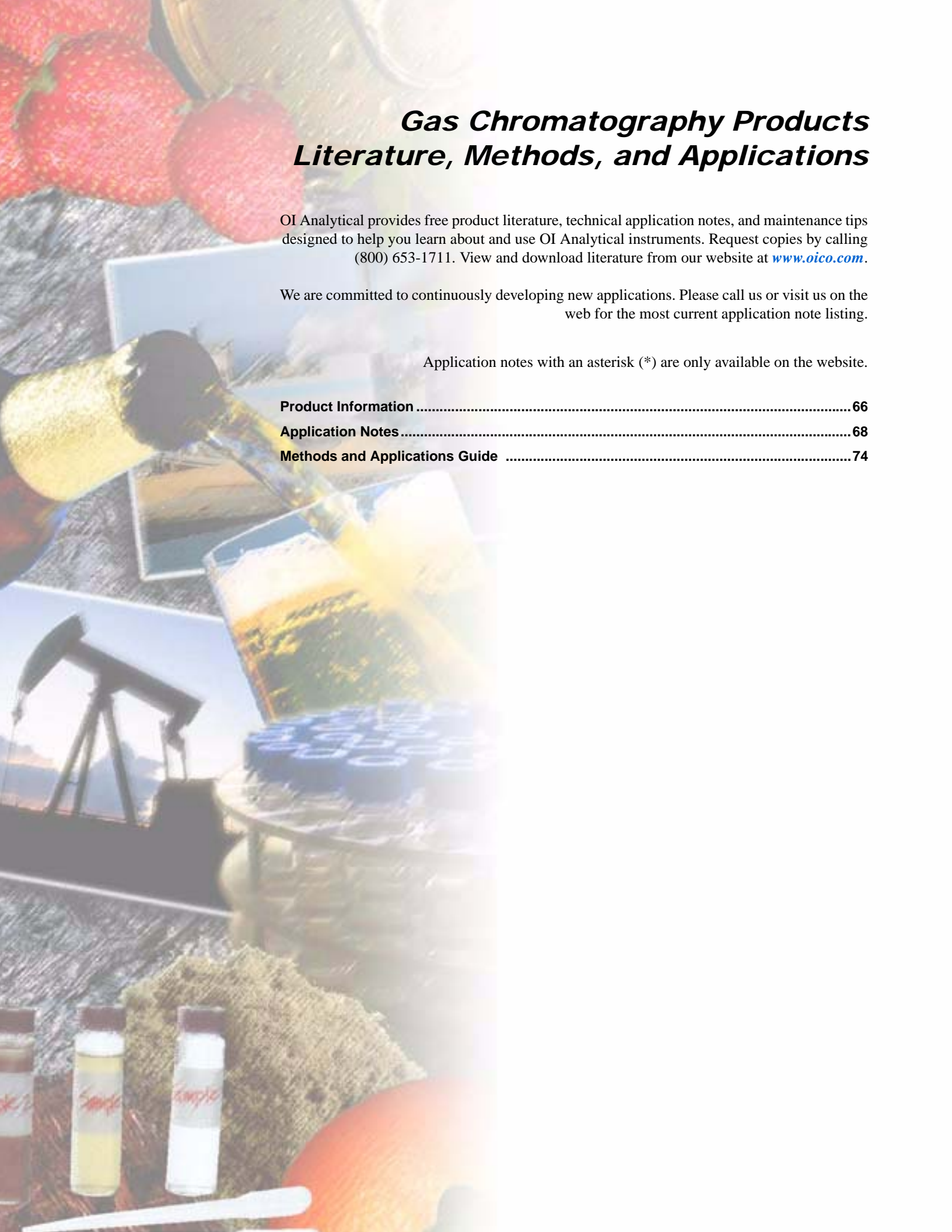
Tubing

Product	Size	Unit	PN
Copper tubing	1/8" x 0.070" I.D.	foot	111427
DB-1 tubing, precolumn	0.53 mm I.D.	5/pk	226134
Deactivated fused silica tubing, precolumn	0.53 mm I.D.	5/pk	202754
Nickel tubing	1/16" x 0.020" I.D.	foot	165531
Nickel tubing	1/16" x 0.030" I.D.	foot	253054
PEEK® tubing	1/16" x 0.020" I.D.	foot	197194
PEEK tubing	1/16" x 0.030" I.D.	foot	197202
Silicone tubing, clear	1/4" x 1/8" I.D.	foot	179085
Stainless steel tubing	1/16" x 0.020" I.D.	foot	111732
Stainless steel tubing	1/16" x 0.030" I.D.	inch	193409
Stainless steel tubing	1/16" x 0.040" I.D.	foot	111864
Stainless steel/Silcosteel® tubing	1/16" x 0.020" I.D.	inch	184978
Stainless steel/Sulfinert® tubing	1/16" x 0.020" I.D.	foot	319638
Stainless steel/Sulfinert tubing	1/16" x 0.040" I.D.	foot	319639
Teflon® tubing	1/16" x 0.007" I.D.	foot	272542
Teflon tubing	1/16" x 0.010" I.D.	foot	139065
Teflon tubing	1/16" x 0.020" I.D.	foot	165896
Teflon tubing	1/16" x 0.031" I.D.	foot	145591
Teflon tubing	1/16" x 0.038" I.D.	foot	234401
Teflon tubing	1/8" x 0.030" wall	foot	147901
Urethane tubing, clear	1/8" x 1/16" I.D.	foot	166224



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Application notes with an asterisk (*) are only available on the website.

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Product Information

Air Analysis	0135	Air-Tube Desorber accessory specifications (for use with Models 4460A and 4560 Series Sample Concentrators)
	0393	VOST accessory specifications (for use with MPM-16 and DPM-16 autosamplers)
Autosamplers	0756	Model 4552 W/S Autosampler specifications
	1436	Model 4551A Vial Autosampler specifications
Detectors (GC)	0233	Model 4450 PID/FID Tandem Detector Configuration specifications
	0243	Model 4430 Photoionization Detector (PID) specifications
	0697	Model 5360/5360A Halogen Specific Detector (XSD™) specifications
	0700	Model 5320 Electrolytic Conductivity Detector (ELCD) specifications
	0740	Model 5380 Pulsed Flame Photometric Detector (PFPD) specifications
	0880	Model 5390 PID/XSD Tandem Detector Configuration specifications
	1047	Model 5350 PID/ELCD Tandem Detector Configuration specifications
	1435	PFPDView (Model 5380 PFPD control software) specifications
Fluorinated By-Products Analyzer	1120	Fluorinated By-Products Analyzer (FBA) specifications
GC Systems	0104	Pesticides...from Cleanup to Analysis
	0554	Model FM-2000 GC Monitoring System specifications (for continuous air monitoring)
	0690	GC Volatiles Systems specifications
	1700	S-PRO 3200 Series GC System for Sulfur Analysis brochure
Maintenance and Support Information	1725	Customer and Technical Support Services brochure

**Purge-and-Trap
Sample
Concentrators**

1029	MicroTrap™ for Purge and Trap specifications
1338	Automated Multipoint Process Sampler (AMPS) specifications
1573	Standards Addition Module (SAM) specifications
1811	PT Express™ Dual Purge-and-Trap Interface brochure
1917	Eclipse™ Purge-and-Trap Sample Concentrator specifications
1944	Model 4660 Eclipse Purge-and-Trap Sample Concentrator brochure

Sample Preparation

0104	Pesticides...from Cleanup to Analysis
1463	GPC AutoPrep 2000 specifications
1717	WinSEP™ (GPC AutoPrep 2000 control software) specifications
1734	Gel Permeation Chromatography (GPC) Cleanup Systems brochure
1770	AIM500 Block Digestion System specifications
1789	Model SP 2000 specifications
2065	UVD-1000 UV Detector/Chart Recorder specifications

Application Notes

BTEX/Hydrocarbon Analysis

- 0047* Determination of Hydrocarbon's Class Using PID/FID
- 0048 Hydrocarbon Confirmation Analysis Using PID/FID
- 0054* New PID/FID for GC
- 0506 An Analyzer for the Rapid Analysis of BTEX and GRO in Water and Soil
- 0887 Rapid Sample Screening for BTEX in Soils Using Static Headspace/GC/Flame-Ionization-Photoionization Detection
- 1105 BTEX Analysis Using Static Headspace with Gas Chromatography/Mass Spectrometry
- 1442 Analysis of BTEX in Soil and Water Matrices by USEPA Method 5021 Using the Model 4632M Headspace Autosampler
- 2074 Petrochemical Application Support Library

Pesticides/PCB Analysis

- 0068 Chlorinated Pesticide Detection Using ELCD
- 0080 Selective Detection of PCBs in Transformer Oil Using ELCD
- 0129* OI Analytical Applications: Model 4420 Pentachlorophenol
- 0130 Applications for Model 4420 ELCD: PCBs in Transformer Oil
- 0192 Applications of ELCD for Selective Detection of Halogen, Nitrogen, and Sulfur Pesticides
- 0222* Screening Pesticides and PCBs
- 0273 Maintaining Optimal Performance of the ELCD in Pesticides and PCB Analysis
- 0357* The Introduction of an Improved ELCD for Gas Chromatographic Analysis of Pesticides
- 0437 A System Configuration for Dual Method, Simultaneous Analysis of Volatile and Semivolatile Organic Compounds by GC
- 0441* Maintaining a Dual Column, Dual ELCD GC System for Extended Analysis of Multi-Residue Pesticide Extracts
- 0457* Analysis of Organochlorine Pesticide Residues Using Simultaneous Injection of Two Capillary Columns with Electron Capture and Electrolytic Conductivity Detectors
- 0503* Comparative Analysis of Propargite by FPD- and ELCD-Equipped Gas Chromatograph
- 0614 An Alternative Method for the Determination of *n*-Methyl Carbamates in Milk

- 0982 Analysis of USEPA Method 608 Chlorinated Pesticides Using the OI Analytical XSD
- 1076 A New Pulsed Flame Photometric Detector for the Analysis of Pesticides
- 1079 Analysis of Chlorinated Pesticides Using Gas Chromatography with a Halogen Specific Detector
- 1174 Analysis of Polychlorinated Biphenyls Using Gas Chromatography with a Halogen Specific Detector
- 1195 Analysis of Organophosphorus Pesticides Using Gas Chromatography with Pulsed Flame Photometric Detection
- 1379 Multi-element Analysis of Pesticides Using GC Systems Equipped with Multiple Selective GC Detectors (*Pittcon 1999*)
- 1546 Analysis of a Complex Garlic Extract for Chlorinated Pesticides Using the OI Analytical Model 5360 Halogen Specific Detector
- 1764 Analysis of Sulfur-Containing Carbamate Pesticides Using a Pulsed Flame Photometric Detector (*Pittcon 2002*)
- 2054 Using the GPC AutoPrep 2000 System for Cleanup of Olive Oil Prior to Pesticides Analysis by GC/XSD or GC/PFPD (*Pittcon 2004*)
- 0083 Positive Identification of Purgeable Halocarbons
- 0106 Analysis of VOCs in Water Using Ion Trap Detector
- 0146* Analysis of Volatile Compounds in Drinking Water
- 0230 Finally! Totally Automated Volatiles Analysis Using Interactive Purge-and-Trap Communications and Control with the PC
- 0285 Detection Limits and Analysis Time Using Wide and Narrow Bore Capillary Columns for Purge-and-Trap GC/MS Analyses
- 0294 Using the OI Analytical Cryo-Focusing Module to Optimize Purge-and-Trap Chromatography with Small-Bore Capillary Columns
- 0297 Volatile Organics Analysis: Building a State-of-the-Art Purge-and-Trap GC/MS System
- 0403 Use of a Cryo-Focusing Module as a Water Management Tool in Purge-and-Trap/GC/MS Analysis
- 0404 Efficiency of Cryo-Focusing Traps for Purge-and-Trap Gas Chromatography
- 0405 Theory and Operation of Water Management Methods in Purge-and-Trap Gas Chromatography
- 0406 A Comparison of Sample Heating Techniques Used in Purge-and-Trap Gas Chromatography

Purge-and-Trap/VOC Analysis

- 0409 Operation of Purge-and-Trap Systems in the Real World: Performance and Pitfalls
- 0420 OI Analytical Model 4560 Sample Concentrator- Cyclone Water Management System
- 0433 A Low-Dead-Volume Injector for Both Semi-Volatile and Volatile Gas Chromatographic Analysis
- 0442 An Automated GC/MS System for the Analysis of Volatile and Semivolatile Organic Compounds in Water
- 0444 Model 4560 Sample Concentrator-Sample Heating Techniques
- 0451 Advantages of the OI Analytical Tenax/Silica Gel/Carbon Molecular Sieve (#10) Trap
- 0452 OI Analytical Model 4560 Sample Concentrator-Rapid Trap Heating
- 0506 An Analyzer for the Rapid Analysis of BTEX and GRO in Water and Soil
- 0518 Cycle Time as a Productivity Factor in Purge-and-Trap Analysis
- 0525 GC/MS Analysis of Volatiles in Less Than 15 Minutes!
- 0653 “Trends in Purge and Trap” Journal of Chromatographic Science, August 1994
- 0775 Parameter Optimization to Eliminate the Need for Cryogenic Focusing in Purge and Trap/Gas Chromatography/Mass Spectrometry
- 0875 A New Purge-and-Trap Sample Concentrator Optimized for Low Desorb Flow Operation
- 0983 Purge-and-Trap Analysis of Trihalomethanes
- 1008 A New MicroTrap for Purge-and-Trap Sample Concentration
- 1024 Maximize P&T/GC/MS Productivity with the MicroTrap
- 1077 A New Standard Additions Module for Purge-and-Trap Autosampling
- 1103 Purgeable Halogenated Hydrocarbon Analysis Using Static Headspace with Gas Chromatography/Mass Spectrometry
- 1104 Purgeable Aromatic Hydrocarbon Analysis Using Static Headspace with Gas Chromatography/Mass Spectrometry
- 1106 Low-Level Purgeable Aromatic Hydrocarbon Analysis Using Static Headspace with Gas Chromatography/Mass Spectrometry
- 1107 Trihalomethane Analysis Using Static Headspace Gas Chromatography/Mass Spectrometry
- 1173 High Speed Purge-and-Trap/Gas Chromatographic Analysis of BTEX Samples

- 1285 Proper Trap Selection for the OI Analytical Model 4460A Purge-and-Trap Sample Concentrator
- 1286 Proper Trap Selection for the OI Analytical Model 4560 Purge-and-Trap Sample Concentrator
- 1327 USEPA Method 524.2 Revision 4: Optimization of the Analysis of VOAs in Water by GC/MS
- 1358 Analysis of Environmental Endocrine Disrupters Using the OI Analytical Model 4560 Purge-and-Trap Sample Concentrator and GC/MS-SIM Detection
- 1371 Shorter Purge-and-Trap Desorption Times with Direct Trap Heating (*Pittcon 1999*)
- 1377 Description of a New Multipoint Water Sampler for Continuous, On-line Sampling and Analysis of VOCs by Purge and Trap/GC (*Pittcon 1999*)
- 1388 Acetaldehyde in Polyethylene Terephthalate (PET) Using the Air-Tube Desorber Accessory
- 1412 Low-Level Volatiles in Soil and Water by USEPA Method 5035 Using the Model 4552 Water/Soil Autosampler (*Pittcon 2000*)
- 1418 Blood Alcohol Analysis Using the Model 4632M Headspace Autosampler
- 1420 Blood Alcohol Determination Using the Model 4632M Headspace Autosampler and PLOT Column
- 1426 Analysis of Methyl *tert*-Butyl Ether (MTBE)
- 1432 Analysis of Organic Pollutants in the Pharmaceutical Industry Using USEPA Method 1666 (*Pittcon 2000*)
- 1440 Analysis of Toner Resin Polymers Using the Model 4632M Headspace Autosampler
- 1441 Identification of Flavors and Fragrances by Purge-and-Trap GC/MS
- 1445 Analysis of Organic Solvents in Pharmaceutical Products Using United States Pharmacopoeia (USP) Method 467 (*Pittcon 2000*)
- 1454 Improved Volatile Organic Compound Analysis Using a New Vial Autosampler for Water Matrices (*Pittcon 2000*)
- 1618 Low-Level Sulfur Compounds in Beer by Purge and Trap with a Pulsed Flame Photometric Detector (PFPD)
- 1735 Geosmin and 2-Methylisoborneol by Purge and Trap (*Pittcon 2002*)
- 1743 Improved Performance and Productivity of Purge-and-Trap Analyses (*Pittcon 2002*)
- 1908 Reduced VOC Sample Analysis Times Using a New Dual Purge-and-Trap System (*Pittcon 2003*)
includes OI Analytical Recommended Purge-and-Trap Operating Conditions

- 1912 Introducing the Eclipse: A New Generation of Purge-and-Trap Sample Concentrators (*Pittcon 2003*)
- 1932 Fast Cycle Times for VOC Analyses: The Whole Story
- 1934 The Eclipse Purge-and-Trap Sample Concentrator Initial Laboratory Test Results, Part I
- 1937 The Eclipse Purge-and-Trap Sample Concentrator Initial Laboratory Test Results, Part II
- 1996 Analysis of Fuel Oxygenates Using the Eclipse Purge-and-Trap Sample Concentrator (*Pittcon 2004*)

Selective Detectors

- 0511 Applications of the ELCD for the Selective Detection of Halogenated Contaminants in Petroleum Products
- 0767 A New Halogen Specific Detector: The Model 5360 XSD
- 0788 Determination of Semivolatile Organic Compounds in Soils Using Thermal Extraction/GC/PID/ELCD
- 1127 Using Dual Gate Subtraction to Enhance the Selectivity of a Pulsed Flame Photometric Detector (PFPD)
- 1166 Model 5380 PFPD Photomultiplier Tube and Optical Filter Configurations
- 1172 Halogen and Compound Dependence of Response of an Electrolytic Conductivity Detector for Gas Chromatography
- 1253 Organo-Tin Analysis by Capillary Gas Chromatography
- 1373 Optimization of a Pulsed Flame Photometric Detector for Nontraditional Elements (*Pittcon 1999*)
- 1379 Multi-element Analysis of Pesticides Using GC Systems Equipped with Multiple Selective GC Detectors (*Pittcon 1999*)
- 1426 Analysis of Methyl *tert*-Butyl Ether (MTBE)
- 1502 Determination of Volatile Sulfur Compounds in Beverages Using Static Headspace and Pulsed Flame Photometric Detection
- 1546 Analysis of a Complex Garlic Extract for Chlorinated Pesticides Using the OI Analytical Model 5360 Halogen Specific Detector
- 1618 Low-Level Sulfur Compounds in Beer by Purge and Trap with a Pulsed Flame Photometric Detector (PFPD)
- 1656 Using the Halogen Specific Detector (XSD) as an Alternative to the ELCD in USEPA Methods (*Pittcon 2001*)
- 1711 Options for Quantifying Sulfur Compounds by PFPD
- 1762 Initial Experiences from the Field with the OI Analytical S-PRO 3200 GC System (*Pittcon 2002*)

- 1763 Determination of Total Sulfur Content in Petrochemical Samples Using a Pulsed Flame Photometric Detector (PFPD) (*Pittcon 2002*)
- 1764 Analysis of Sulfur-Containing Carbamate Pesticides Using a Pulsed Flame Photometric Detector (*Pittcon 2002*)
- 1801 “The Future of GC Detectors in the Era of Mass Spectrometer Detection,” American Laboratory, October 2001
- 1901 A Newly Approved ASTM Standard for Analysis of Thiophene in Benzene using a Pulsed Flame Photometric Detector (*Pittcon 2003*)
- 1906 Analysis of Sulfur-Containing Flavor Compounds by GC/MS with a Pulsed Flame Photometric Detector (*Pittcon 2003*)
- 2074 Petrochemical Application Support Library
- Field and Mobile Monitoring**
- 0673 Mobile Field Monitoring Using the Model FM-2000: A System Description and Operations Guide
- 0674 Monitoring for Volatile Organic Compounds (VOCs) Using the FM-2000 Continuous Air Monitoring Systems
- Maintenance and Support Information**
- 0051 Model 4430 PID Troubleshooting for High Baseline
- 0158 Vent Valve Configurations for ELCD
- 0176 Model 4460A/HP-MSD Cable Interface
- 0190 Service Pesticide Standard
- 0206* PID Window Cleaning
- 0284 Model 4420 Cell Cleaning Procedure
- 0374* ELCD Transfer Line Rinsing
- 1166 Model 5380 PFPD Photomultiplier Tube and Optical Filter Configurations
- 1285 Proper Trap Selection for the OI Analytical Model 4460A Purge-and-Trap Sample Concentrator
- 1286 Proper Trap Selection for the OI Analytical Model 4560 Purge-and-Trap Sample Concentrator

Methods and Applications Guide

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Air pollution/ industrial hygiene	Ammonia by automated visible spectrometry	NIOSH 6015				
Air pollution/ industrial hygiene	Aromatic hydrocarbons by gas chromatography (GC)	NIOSH	Flame- ionization Detector (FID), Photoionization Detector (PID)/ FID			Solvent desorption, thermal desorption
Air pollution/ industrial hygiene	BTEX/TPH	USEPA TO-1, TO-2	PID, PID/ Halogen Specific Detector (XSD), PID/FID	System VOC	Purge-and-trap (P&T) sample concentrator, Air- Tube option	
Air pollution/ industrial hygiene	Chlorinated pesticides and herbicides by GC	NIOSH 9200, various	Electrolytic Conductivity Detector (ELCD), XSD	Pesticide Analysis System		Solvent desorption
Air pollution/ industrial hygiene	Highly-volatile organics in ambient	USEPA TO-1, TO-2	XSD, PID/XSD, PID/FID, PID/ ELCD	System VOC	P&T sample concentrator, Air- Tube option	
Air pollution/ industrial hygiene	Mercaptans by GC	NIOSH	Pulsed Flame Photometric Detector (PFPD)			Solvent desorption
Air pollution/ industrial hygiene	Organic solvents by GC	Various NIOSH	FID, PID/FID, ELCD, PID, XSD			Solvent desorption, thermal desorption
Air pollution/ industrial hygiene	Organophospho- rous pesticides by GC	NIOSH 5600	PFPD			Solvent desorption
Air pollution/ industrial hygiene	Polychlorinated biphenyls (PCB) by GC	NIOSH 5503	XSD, ELCD (alternatives)			Solvent desorption
Air pollution/ industrial hygiene	Polynuclear aromatic hydrocarbons by GC	NIOSH 5515	FID, PID/FID			Solvent desorption
Air pollution/ industrial hygiene	Principal organic hazardous constituents		PID, XSD, PID/ XSD, PID/FID, PID/ELCD		P&T sample concentrator	
Air pollution/ industrial hygiene	Volatile aromatic hydrocarbons		ELCD, PID, XSD, PID/XSD, PID/FID, PID/ ELCD		P&T sample concentrator, Air- Tube option	
Air pollution/ industrial hygiene	VOST analysis	USEPA 5040, 5041			P&T sample concentrator	
Drinking water	Chlorophenoxy herbicides, liquid/liquid extraction, GC with electron capture detector (ECD)	USEPA 515; AOAC 992.32	XSD, ELCD (alternatives to ECD)			
Drinking water	Organochlorine pesticides and PCBs, liquid/ liquid extraction, GC with ECD	USEPA 505, 508	XSD, ELCD (alternatives to ECD)	Pesticide Analysis System		

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Drinking water	Volatile halogenated organic compounds, P&T, GC with PID and ELCD	USEPA 502.1	ELCD, PID, XSD (alternative)	System VOC	P&T sample concentrator, P&T water autosampler	
Drinking water	Volatile organics, GC with PID and ELCD	USEPA 502.2	XSD (alternative to ELCD), PID/ELCD	System VOC	P&T sample concentrator, P&T water autosampler	
Drinking water	Volatile organics, P&T, GC with mass selective detector	USEPA 524.2			P&T sample concentrator, P&T water autosampler	
Metals digestion	Acid digestion of elements from sediments using closed vessel microwave heating	ASTM 5258				Microwave digestion
Metals digestion	Microwave-assisted acid digestion of aqueous samples and extracts	USEPA 3015				Microwave digestion
Metals digestion	Microwave-assisted acid digestion of sediments, soils, and oils	USEPA 3051				Microwave digestion
Metals digestion	Microwave-assisted acid digestion of siliceous and organically-bound matrices	USEPA 3052				Microwave digestion
Petrochemical	COS in propylene	ASTM D5303	PFPD	S-PRO 3200		
Petrochemical	Determination of sulfur compounds in natural gas	ISO 6326	PFPD			
Petrochemical	Determination of sulfur compounds in natural gas by GC	ISO 19739:2004	PFPD			
Petrochemical	Standard test method for analyzing organic contaminants on silicon wafer surfaces by thermal desorption GC	ASTM D1982-99	PFPD			
Petrochemical	Standard test method for comparison of waterborne oils by GC	ASTM D3328	FID, PFPD			

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Petrochemical	Standard test method for determination of sulfur compounds in natural gas and gaseous fuels by GC and flame photometric detection (FPD)	ASTM D6228	PFPD			
Petrochemical	Standard test method for determination of trace thiophene in refined benzene by GC	ASTM D4735	PFPD			
Petrochemical	Standard test method for sulfur compounds in light petroleum liquids and sulfur-selective detection	ASTM D5623	PFPD			
Petrochemical	Standard test method for trace carbonyl sulfide in propylene by GC	ASTM D5303	PFPD			
Petrochemical	Sulfur in natural gas and gaseous fuels	ASTM D6228	PFPD			
Petrochemical	Trace sulfur in light petroleum hydrocarbons	ASTM D3120	PFPD			
Petrochemical	Trace sulfur in liquid aromatic	ASTM D3961	PFPD	S-PRO 3200		
Product testing	Organochlorine and organophosphorous pesticide residues by GC	AOAC 985.22	XSD, ELCD, PFPD	Pesticide Analysis System		Gel permeation chromatography (GPC)
Product testing	Organophosphorous pesticide residues	AOAC 974.22	PFPD	Pesticide Analysis System		
Product testing	Organophosphorous pesticide residues	AOAC 968.24	PFPD	Pesticide Analysis System		
Product testing—agricultural products	Synthetic pyrethroids in agricultural products	AOAC 998.01	XSD, ELCD	Pesticide Analysis System		GPC
Product testing—animal fats	Organochlorine pesticide residues in animal fats	AOAC 984.21	XSD, ELCD	Pesticide Analysis System		GPC
Product testing—animal feeding stuffs	Determination of organochlorine pesticide residues by GC	ISO 14181:2000	XSD, ELCD	Pesticide Analysis System		GPC
Product testing—animal feeding stuffs	Determination of organophosphorous pesticide residues by GC	ISO 14182:1999	PFPD	Pesticide Analysis System		GPC

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Product testing–animal feeding stuffs	Determination of the content of fatty acids by GC	ISO 17764:2002	FID			
Product testing–fertilizer	Total nitrogen by segmented flow analysis (SFA)	Salicylate	Expanded Range (ER), photometric	Flow Solution IV		Dialysis
Product testing–fertilizer	Total phosphorous by on-line UV/persulfate digestion	Phosphovanadomolybdate	ER, photometric	Flow Solution IV	Flow injection analysis (FIA) (optional)	UV digestion
Product testing–food	Determination of organochlorine and organophosphorous pesticides in foods	FDA Pesticide Analytical Manual	PFPD, XSD, ELCD	Pesticide Analysis System		GPC
Product testing–food	Organochlorine pesticides and PCB residues in fish	AOAC 983.21	XSD, ELCD	Pesticide Analysis System		GPC
Product testing–milk and milk products	Determination of nitrate and nitrite content using segmented flow analysis	ISO 14673-2:2004	ER, photometric	Flow Solution IV		
Product testing–rice	Determination of amylose in rice extracts by SFA	Iodine	ER, photometric	Flow Solution IV		
Product testing–tobacco	Determination of organochlorine pesticide residues by GC	ISO 4389:2000	XSD, ELCD	Pesticide Analysis System		GPC
Product testing–tobacco	Determination of the content of reducing carbohydrates by continuous flow analysis (CFA)	ISO 15154:2003	ER, photometric			
Product testing–tobacco	Determination of the content of reducing substances by CFA	ISO 15153:2003	ER, photometric	Flow Solution IV		
Product testing–tobacco	Determination of the content of total alkaloids as nicotine by CFA	ISO 15152:2003	ER, photometric	Flow Solution IV		
Product testing–tobacco	Determination of the nitrate content by CFA	ISO 15517:2003	ER, photometric	Flow Solution IV		
Product testing–tobacco	Nicotine by SFA	Cyanogen chloride/aniline	ER, photometric	Flow Solution IV		
Product testing–tobacco	Total and reducing sugars by SFA	<i>p</i> -Hydroxybenzoic acid hydrazide	ER, photometric	Flow Solution IV		
Product testing–tobacco	Volatile base by on-line distillation and SFA	Phenate	ER, photometric	Flow Solution IV		On-line distillation
Product testing–wine	Determination of reducing sugars by SFA	Cupric/neocuproine	ER, photometric	Flow Solution IV		

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Product testing–wine	Determination of total acidity by SFA	Bromocresol purple	ER, photometric	Flow Solution IV		
Product testing–wine	Determination of total sulfites by SFA	p-Rosaniline	ER, photometric	Flow Solution IV		
Product testing–wine	Determination of volatile acidity by SFA	Iodide/iodate	ER, photometric	Flow Solution IV		
Seawater	Ammonia by SFA	Phenate	LED/ER, photometric	Flow Solution IV		
Seawater	Nitrite nitrogen and nitrate plus nitrite nitrogen by SFA	Cadmium reduction	LED/ER, photometric	Flow Solution IV		
Seawater	Orthophosphorous by SFA	Molybdenum blue	LED/ER, photometric	Flow Solution IV		
Seawater	Silica by SFA	Molybdenum blue	LED/ER, photometric	Flow Solution IV		
Soil quality	Determination of the content of volatile aromatic hydrocarbons, naphthalene, and volatile halogenated hydrocarbons by P&T with thermal desorption GC	ISO 15009:2002	PID/ELCD, PID/XSD	System VOC, System BTEX	P&T sample concentrator, P&T water autosampler	
Soil quality	Nitrate plus nitrite nitrogen in soil and plant extracts by SFA	Cadmium reduction	ER, photometric	Flow Solution IV		Dialysis
Soil quality	Orthophosphate in soil and plant extracts by SFA	Molybdenum blue	ER, photometric	Flow Solution IV		Dialysis
Soil quality	Soil and plant ammonia by SFA	Phenate	ER, photometric	Flow Solution IV		Dialysis
Soil quality	Total Kjeldahl nitrogen (TKN) in soil and plant digests by SFA	Salicylate	ER, photometric	Flow Solution IV		Dialysis
Soil quality	Total phosphorous in soil and plant digests by SFA	Molybdenum blue	ER, photometric	Flow Solution IV		Dialysis
Solid and hazardous waste	BTEX/MTBE by P&T, GC	USEPA 8021b	PID, PID/FID	System BTEX	P&T sample concentrator, P&T water autosampler	
Solid and hazardous waste	Gasoline range and diesel range organics by GC	USEPA 8015 modified	PID/FID	System BTEX	P&T sample concentrator, P&T water autosampler	
Solid and hazardous waste	Halogenated volatile organics by GC	USEPA 8010	ELCD, XSD	System VOC	P&T sample concentrator, P&T water autosampler	

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Solid and hazardous waste	Organochlorine pesticides and PCBs by GC	USEPA 8081a	XSD, ELCD (alternatives to ECD)	Pesticide Analysis System		GPC by USEPA 3640A
Solid and hazardous waste	Organophosphorous pesticides by GC with FPD	USEPA 8141a	PFPD	Pesticide Analysis System		GPC by USEPA 3640A
Solid and hazardous waste	Semivolatile organics by GC/ mass spectrometry (MS)	USEPA 8270				GPC by USEPA 3640A
Solid and hazardous waste	Total petroleum hydrocarbons by GC	Various state methods	FID, PID/FID			
Solid and hazardous waste	Volatile organics by GC/MS	USEPA 8260			P&T sample concentrator, P&T water autosampler	
Solid and hazardous waste	Volatile organics by P&T, GC	USEPA 8021b	PID/FID, PID/ELCD	System VOC, System BTEX	P&T sample concentrator, P&T water autosampler	
Wastewater and industrial effluents	Chlorinated acid herbicides by GC	USEPA 615; Standard Methods 6640 B	HECD, XSD (alternatives to ECD)	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Chlorinated hydrocarbons by GC	USEPA 612	XSD, ELCD (alternatives to ECD)			GPC
Wastewater and industrial effluents	Differentiation of diesel and crude oil by GC	USEPA 1663	FID, PID/FID			
Wastewater and industrial effluents	Haloethers by GC	USEPA 611; Standard Methods 6251	XSD, ELCD (alternatives to ECD)			
Wastewater and industrial effluents	Organochlorine pesticides and PCBs by GC	USEPA 608; Standard Methods 6630 B&C; ASTM D3086, D5812	XSD, ELCD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Organohalide pesticides and PCBs by GC	USEPA 617	XSD, ELCD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Organohalide pesticides and PCBs by GC	USEPA 1656	XSD, ELCD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Organophosphorous pesticides by GC with FPD	USEPA 614, 614.1	PFPD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Organophosphorous pesticides by GC with FPD	USEPA 617	PFPD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Organophosphorous pesticides by GC with FPD	USEPA 1657	PFPD	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Phenoxy acid herbicides by GC	USEPA 1658	XSD, ELCD (alternatives to ECD)	Pesticide Analysis System		GPC
Wastewater and industrial effluents	Purgeable aromatics by GC and PID	USEPA 602; Standard Methods 6200 C	PID, PID/FID	System VOC, System BTEX	P&T sample concentrator, P&T water autosampler	

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Wastewater and industrial effluents	Purgeable halocarbons by P&T, GC with PID and ELCD	USEPA 601; Standard Methods 6200 C	ELCD, PID, PID/ELCD, XSD (alternative)	System VOC	P&T sample concentrator, P&T water autosampler	
Wastewater and industrial effluents	Purgeable organics by GC/MS	USEPA 624; ASTM D5790; Standard Methods 6232 C			P&T sample concentrator, P&T water autosampler	
Wastewater and industrial effluents	Semivolatile organics by GC/MS					GPC
Wastewater and industrial effluents	Volatile pesticides by GC	USEPA 618	XSD, ELCD (alternatives to ECD)			
Water quality	Ammonia nitrogen in water by the automated phenate method using SFA or FIA	USEPA 350.1	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Anionic surfactants as MBAS by CFA	Standard Methods 5540C modified	ER, photometric	Flow Solution IV		
Water quality	Boron by SFA	Azomethine-H	ER, photometric	Flow Solution IV		
Water quality	Bromide by SFA or FIA	Fluorescein and chloramine-T	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Chloride by SFA or FIA	USEPA 325.2	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Color by SFA or FIA	Standard Methods 2020B modified	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Colorimetric determination of postdistillation cyanide	USEPA 335.3	ER, photometric	Flow Solution IV		
Water quality	Colorimetric determination of total cyanide by on-line UV digestion and distillation	USEPA 335.3	ER, photometric	Flow Solution IV		UV digestion, on-line distillation
Water quality	Determination of ammonia, part 2, automated spectrometric method	ISO 7150-2:1986	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of chloride by CFA and FIA	ISO 15682:2000	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of chromium(VI), spectrometric method using 1,5-diphenylcarbazide	ISO 11083:1994 modified	ER, photometric	Flow Solution IV		

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Water quality	Determination of dissolved sulfide, photometric method using molybdenum blue	ISO 10530:1992	ER, photometric	Flow Solution IV	FIA	
Water quality	Determination of free and total cyanide by CFA	ISO 14403:2002	ER, photometric	Flow Solution IV		
Water quality	Determination of nitrite nitrogen and nitrate nitrogen and the sum of both by SFA and FIA	ISO 13395:1996	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of orthophosphate and total phosphorous content by FIA and SFA	ISO 15681:2003	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of phenol index by CFA and FIA	ISO 14402:1999	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of soluble silicates by CFA and FIA	ISO 16264:2002	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Determination of surfactants, part 1, determination of anionic surfactants by measurement of the methylene blue index (MBAS)	ISO 7875-1:1976 modified	ER, photometric	Flow Solution IV		
Water quality	Hardness by FIA	USEPA 130.1	ER, photometric	Flow Solution IV	FIA	
Water quality	Hexavalent chromium by SFA or FIA	Standard Methods 3500 Cr modified	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Nitrite nitrogen, and nitrate plus nitrite nitrogen by SFA or FIA	USEPA 353.2	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	On-line total organic carbon (TOC) monitoring	ASTM 5173-97	Infrared	Model 1010 Analyzer		
Water quality	Organochlorine pesticide residues in water	AOAC 990.96	XSD, ELCD	Pesticide Analysis System		GPC
Water quality	Orthophosphorous by SFA or FIA	USEPA 365.1	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Oxidizable substance test substitute	USP oxidizable substance test	Infrared	Model 1010 Analyzer		
Water quality	Phenols by on-line distillation SFA	USEPA 420.2	ER, photometric	Flow Solution IV	On-line distillation	

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Water quality	Phenols by SFA or FIA (postdistillation)	USEPA 420.2	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Silica by SFA	USEPA 370.1 modified	ER, photometric	Flow Solution IV		
Water quality	Sulfate by SFA or FIA	USEPA 375.2	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Sulfide by CFA	USEPA 376.2 modified	ER, photometric	Flow Solution IV	FIA	
Water quality	TKN by gas diffusion and FIA	pH indicator	ER, photometric	Flow Solution IV		
Water quality	TKN by the automated salicylate method (SFA or FIA)	USEPA 351.2	ER, photometric	Flow Solution IV	FIA (optional)	Block digester
Water quality	TOC	USP 643	Infrared	Model 1010 Analyzer		
Water quality	TOC by combustion oxidation	Standard Methods 5301B	Infrared	Model 1020A Analyzer		
Water quality	TOC by persulfate-ultraviolet or heated-persulfate oxidation method	Standard Methods 5301C	Infrared	Model 1010 Analyzer		
Water quality	TOC by wet chemical oxidation	USEPA 415.1	Infrared	Model 1010 Analyzer, Model 1020A Analyzer		
Water quality	TOC in groundwater	USEPA 9060	Infrared	Model 1010 Analyzer, Model 1020A Analyzer		
Water quality	TOC in high-purity water	ASTM D4779-93	Infrared	Model 1010 Analyzer		
Water quality	TOC in water	ASTM D4839-94	Infrared	Model 1010 Analyzer, Model 1020A Analyzer		
Water quality	TOC, DOC, and SUVA	USEPA 415.3	Infrared	Model 1010 Analyzer, Model 1020A Analyzer		
Water quality	Total carbon (TC) and TOC in water	ASTM D2579-93	Infrared	Model 1010 Analyzer		

Application	Technique	Method	Detectors	System	Sample Introduction	Sample Preparation
Water quality	Total cyanide by UV digestion and FIA	OIA-1678	Amphometric	CNSolu-tion 3000	FIA	UV digestion
Water quality	Total iron by SFA	FerroZine®	ER, photometric	Flow Solution IV		
Water quality	Total phosphorous by SFA or FIA	USEPA 365.1	ER, photometric	Flow Solution IV	FIA (optional)	
Water quality	Weak acid dissociable (WAD) cyanide by FIA	USEPA OIA-1677	Amphometric	CNSolu-tion 3000	FIA	

This information is intended only as a reference for this catalog and is not intended to define method requirements. Complete method information is available in the *Annual Book of ASTM Standards*, *Federal Register*, *Standard Methods for the Examination of Water and Wastewater*, and *USP XXV*.



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Catalog Information

Methods and Applications

The method and application information contained herein is intended only as a reference for this catalog and is not intended to define method requirements. Complete method information is available in the *Annual Book of ASTM Standards*, *Federal Register*, *Standard Methods*, and *USP XXII*.

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