

# **P**RECISION GLASSBLOWING

## **ICP & ICP-MS Catálogo de Consumibles**

**Simplemente Precisión**



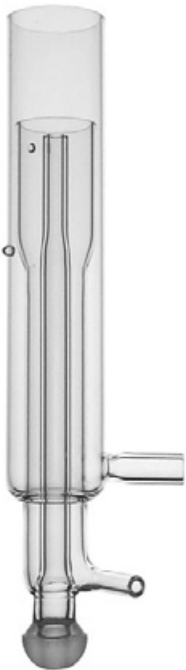
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*ICP & ICP-MS  
Consumables*

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**900-01 - New Standard  
Torch, 2.5mm, 2  
Projections, HMI  
Compatible**



**900-02 - Torch for  
PFA Inert Kit**

## Agilent (Hewlett Packard) 4500 & 7500

### Torches & Accessories

900-01	New Standard Torch, 2.5mm, 2 Projections, HMI Compatible	G3270-67002
900-02	Torch for PFA Inert Kit	G3285-80050
900-03	One Piece Torch, 1.0mm Injector (Agilent 7500)	G1833-65425
900-04	One Piece Torch, 1.5mm Injector (HP 4500)	G1820-65528
900-05	One Piece Torch, 2.5mm Injector (HP 4500)	G1820-65028
900-06	One Piece Torch, 2.5mm Injector (Agilent 7500)	G1833-65423
900-07	One Piece Torch, 1.5mm Injector (Agilent 7500)	G1833-65424
900-08	Demountable Torch, Inert (HP 4500)	G1820-65035
900-09	Demountable Torch, Inert (Agilent 7500)	G1833-65422
900-20	Alumina Injector	
900-24	Quartz Bonnet (HP 4500)	G1820-65026
900-25	Quartz Bonnet (Agilent 7500)	G1833-65421
900-30	PTFE Injector Holder	G1820-65015

### Spray Chambers & Accessories

900-10	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 180°	
900-11	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 90° (HP 4500, Agilent 7500)	G1820-65336
900-12	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 180°, Quartz	
900-13	Scott Spray Chamber, Inner/Outer Tube Flush, Drain & Exit 90°, Quartz (HP 4500, Agilent 7500)	G1820-65337
900-14	Scott Spray Chamber, Inner Tube Extended, Drain & Exit 90°, Quartz	G1820-65339
900-16	Cyclonic Spray Chamber	
900-16Q	Cyclonic Spray Chamber, Quartz	
900-32	Quartz Socket Adapter	
900-36	Quartz Ball Adapter	
900-38	Ball & Socket Adapter, Quartz (HP4500)	G1820-80237
900-39	Ball & Socket Adapter, Quartz (Agilent 7500)	G1833-65426

### Nebulizers

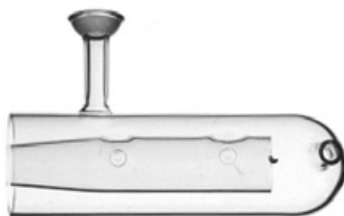
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	G1820-65030
500-77Q	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min, Quartz	G1820-61138
500-93	Crossflow Nebulizer, High-Solids	G1820-65033
500-94	Crossflow Nebulizer, High Flow	G1833-80301
520-30	PTFE End Cap for use with Open End Spray Chamber	

### HP & Agilent Type 2-Stop Pump Tubing

PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	G1820-65220
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	G1820-65215
PT-2160SI	White-White, 0.040" (1.02mm), Silicone, 6/pk	G1820-65217
PT-2220SA	Yellow-Blue, 0.06" (1.52mm), Santoprene, 12/pk	G1820-65216

### HP & Agilent Type 3-Stop Pump Tubing

PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	G1833-65571
PT-3160P	White-White, 0.040" (1.02mm), PVC, 12/pk	G1833-65569
PT-3220SA	Yellow-Blue, 0.06" (1.52mm), Santoprene, 12/pk	G1833-65570



**900-13 - Scott Spray Chamber,  
Inner/Outer Tube Flush, Drain & Exit  
90°, Quartz (HP 4500, Agilent 7500),  
G1820-65337**



**500-77Q - A-Type Concentric  
Nebulizer, 1 lpm Ar, 30psi, 3mL/min,  
Quartz, G1820-61138**

# ARL 3500 Maxi

## Torches & Accessories

100-05	Maxi Torch	139009-0003
100-05W	Maxi Torch, Wear Metals Outer Shield	
100-06	Maxi Torch, 20mm Outer Shield	
100-08	Torch, ICPQ	137000-0000
100-09	Torch, Nitrogen, 3" Port, 28/15 Ball Joint	173127-0000
120-40	Torch, HF/CR Resistant Body	173131-0000
120-44	PTFE Insert for HF Torch	
120-45	PTFE Insert, Adjustable for HF Torch	
100-21	Torch Extension	
100-22	Torch Extension with Optical Port	
100-25	Torch Bonnet	
100-27	Torch Bonnet, Induction Coil M/S	173251-0000
100-28	Argon Snout Tube	170631-0000
120-42	Alumina Injector	1200079
120-55	O-ring for Torch, PTFE Coated Viton	

## Spray Chambers & Accessories

100-12	Conical Spray Chamber for Concentric Nebulizer	173142-0000
100-14	Conical Spray Chamber for MDSN	
100-16	Conical Spray Chamber, Open End with Impact Bead	139008-0000
100-18	Conical Spray Chamber, Open End with Drain	
110-55	Cyclonic Spray Chamber, 10mm Drain	
110-55J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
120-30	ARL Maxi PTFE Spray Chamber	
120-51	PTFE Insert, allows 100-14 to use Concentric Nebulizer	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

## Nebulizers

500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	914319-000P/M
510-50	Babington MDSN, HF Resistant	173259-0000
510-10S	Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar	

## ARL Type Pump Tubing

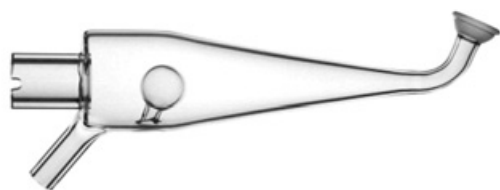
See our complete list of sizes and materials on pages 38, 39.

## ICP & ICP-MS Consumables

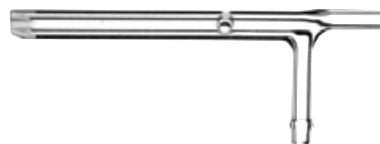
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100-05 - Maxi Torch  
139009-0003



100-14 - Conical Spray Chamber for MDSN



510-10S - Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar



100-25 - Torch Bonnet



510-50 - Babington MDSN, HF Resistant, 173259-0000

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**110-30 - Mini Torch,  
1.5mm Injector,  
173463-0000**



**110-31 - Mini HF/CR  
Torch Body,  
173473-0000**

## ARL 3400/3500 Accuris Mini

### Torches & Accessories

110-30	Mini Torch, 1.5mm Injector	173463-0000
110-30/1.0	Mini Torch, 1.0mm Injector	
110-31	Mini HF/CR Torch Body	173473-0000
110-32	Mini Nitrogen Torch	170692-0000
110-50	Mini High-Solids Torch	
110-35	Torch Bonnet	173252-0000
110-42	Torch Mount	144860
110-48	Injector Assembly	144857
110-54	Argon Snout, Nitrogen	170693-0000
120-55	O-ring for Torch, PTFE Coated Viton	

### Spray Chambers & Accessories

110-33	Conical Spray Chamber, Mini for Concentric Nebulizer	173142-0002
110-33Q	Conical Spray Chamber, Mini for Concentric Neb., Quartz	
110-34	Conical Spray Chamber for Babington MDSN	173142-0003
110-36	Conical Spray Chamber, Water-Cooled for Concentric Neb.	173142-0004
110-55	Cyclonic Spray Chamber, 10mm Drain	
110-55J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
110-55QJ	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain, Quartz	
110-60	ARL Mini HF System	
120-51	PTFE Insert, allows 110-34 to use Concentric Nebulizer	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

### Nebulizers

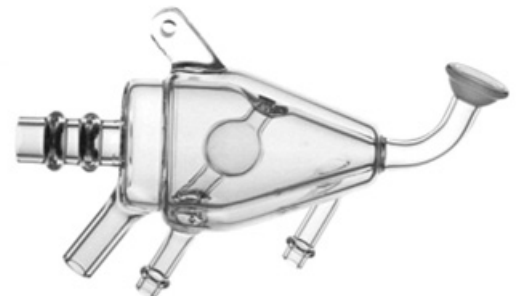
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	915375-000P/M
510-10	Noordermeer V-Groove MDSN Nebulizer	915817-0000
510-50	Babington MDSN, HF Resistant	173259-0000

### ARL Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.



**110-55J - Cyclonic Spray Chamber,  
Water-Cooled, 10mm Drain**



**110-36 - Spray Chamber, Water-Cooled for  
Concentric Nebulizer, 173142-0004**

## ARL Maxim 1 & 3

### Torches & Accessories

110-38	Maxim Torch	S111403
110-45	Maxim CR Torch	S213787
120-55	O-ring for Torch, PTFE Coated Viton	

### Spray Chambers & Accessories

110-39	Spray Chamber, Water-Cooled for Concentric Nebulizer	S702174
110-40	Drain Trap	S702232
110-41	Spray Chamber for Concentric Nebulizer	S702171
110-41Q	Spray Chamber for Concentric Nebulizer, Quartz	
120-56	O-ring for Spray Chamber, PTFE Coated Viton	

### Nebulizers

510-10	Noordermeer V-Groove MDSN Nebulizer	915817-0000
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### ARL Type Pump Tubing

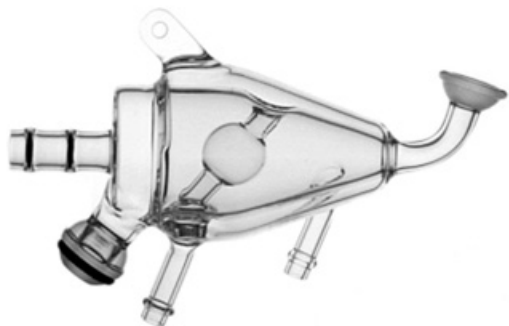
See our complete list of sizes and materials on pages 38, 39.

## ICP & ICP-MS Consumables

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110-38 - Maxim Torch  
S111403



110-39 - Spray Chamber, Water-Cooled for  
Concentric Nebulizer, S702174



510-10 - Noordermeer  
V-Groove MDSN  
Nebulizer, 915817-0000



110-40 - Drain Trap  
S702232

## Did you know...

### Standard ICP Torch Rebuilding

Most ICP torches may be rebuilt for a minimal price compared to the cost of a new torch. Rebuilding a standard torch involves replacing the entire outer shield (tube) and/or replacing broken side arms. In the event the inner shield (tube) and/or the injector on a fixed torch has become cracked or severely devitrified, the torch is considered non-repairable, as the cost of repair would exceed the price of a new torch. Once the torch has been rebuilt, it passes through the same QC program as our new torches ensuring you get a quality rebuilt torch that meets all original specifications. Some restrictions apply and certain torches cannot be rebuilt due to their design. For more information please feel free to call us at 303-693-7329 or E-mail us at [info@precisionglassblowing.com](mailto:info@precisionglassblowing.com).

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200-05 - Torch, Plasma Standard, 025515



200-06 - Torch, Low-Flow, 075542

## Baird 27 MHz

### Torches & Accessories

200-05	Torch, Plasma Standard	025515
220-55	Demountable Torch Body	069987
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

### Baird Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.

## Baird 2000 & 2070

### Torches & Accessories

200-06	Torch, Low-Flow	075542
200-10	Demountable Torch, Low-Flow	075145
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-36	Extension, Ball & Socket	062607
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

### Spray Chambers & Accessories

200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min
500-92	Crossflow Nebulizer
510-10	Noordermeer V-Groove MDSN Nebulizer
510-50	Babington MDSN, HF Resistant

### Baird Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.



500-92 - Crossflow Nebulizer



200-12 - Scott Spray Chamber, Open End, 025492

# Baird PST

## Torches & Accessories

200-06	Torch, Low-Flow	075542
200-10	Demountable Torch, Low-Flow	075145
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-32	PST Purge Window	077200
200-36	Extension, Ball & Socket	062607
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

## Spray Chambers & Accessories

200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	

## Nebulizers

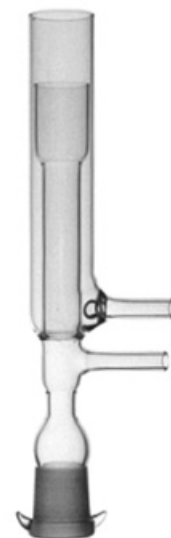
500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min
500-92	Crossflow Nebulizer
510-10	Noordermeer V-Groove MDSN Nebulizer
510-50	Babington MDSN, HF Resistant

## Baird Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.

## ICP & ICP-MS Consumables

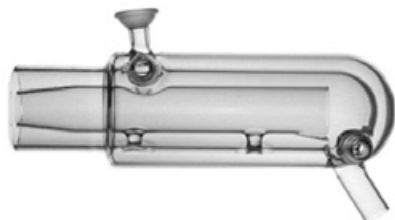
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200-10 - Demountable Torch, Low-Flow, 075145



200-25 - Torch Bonnet, 025492



200-15 - Scott Spray Chamber, Water-Cooled



200-14 - Scott Spray Chamber for Concentric Nebulizer



510-10 - Noordermeer V-Groove MDSN Nebulizer



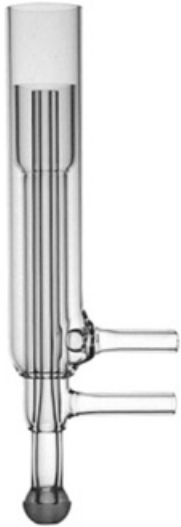
500-70 - C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min



200-30 - Window Tube, 077611



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200-06 - Torch, Low-Flow, 075542



210-10 - AFS/ICP Torch & Tip, 676458

## Baird PSQ and PSX

### Torches & Accessories

200-06	Torch, Low-Flow (PSQ and New PSX)	075542
200-07	Plasma PSX Low-Flow Torch (Old PSX)	069972
200-08	Plasma Low-Flow Torch (Old PSX)	666011
200-09	PSX Labtest Low-Flow Torch	075128
200-10	Demountable Torch, Low-Flow (PSQ and New PSX)	075145
200-11	PSX Low-Flow HF/CR Torch	075129
200-21	Torch Extension	
200-25	Torch Bonnet	025491
200-30	Window Tube	077611
200-33	Entrance Tube, Plasma Labtest	
200-36	Extension, Ball & Socket	062607
200-36Q	Quartz Extension, Ball & Socket	
220-50	Alumina Injector, 4.8"	075132
220-51	Alumina Injector, 5.6"	075144
220-52	Alumina Injector, 7.7"	075145
220-53	PTFE Insert, Fixed	
220-54	PTFE Insert, Adjustable	

### Spray Chambers & Accessories

200-12	Scott Spray Chamber, Open End	025492
200-14	Scott Spray Chamber for Concentric Nebulizer	
200-15	Scott Spray Chamber, Water-Cooled	

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min
500-92	Crossflow Nebulizer
510-10	Noordermeer V-Groove MDSN Nebulizer
510-50	Babington MDSN, HF Resistant

### Baird Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.

## Baird AFS-2000

### Torches & Accessories

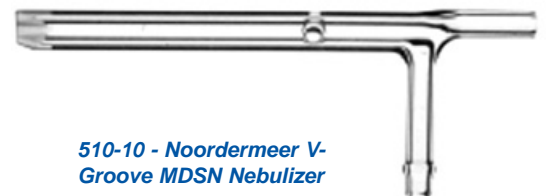
210-10	AFS/ICP Torch & Tip	676458
210-11	AFS/ICP Tip Replacements	676459

### Baird Type Pump Tubing

See our complete list of sizes and materials on pages 38, 39.



510-50 - Babington  
MDSN, HF Resistant



510-10 - Noordermeer V-  
Groove MDSN Nebulizer

## Finnigan Element TS/Sola

### Torches & Accessories

850-05	Standard Torch, TS Sola	
850-08	Demountable Torch, TS Sola	
850-09	Quartz Injector, TS Sola	
850-10	Torch & Injector, TS Sola	
850-11	Alumina Injector, TS Sola	
850-06	Standard Torch, Element	
850-12	Demountable Torch, Element	1091250
850-25	Quartz Bonnet for Demountable Torch, Element	
850-26	Quartz Bonnet for Demountable Torch, Element, Long	
852-10	Quartz Injector, Element	1122800

### Spray Chambers & Accessories

850-15	Scott Spray Chamber, Pyrex, Water-Cooled, TS Sola	
850-16	Scott Spray Chamber, Quartz, Water-Cooled, TS Sola	
850-17	Scott Spray Chamber, Pyrex, Water-Cooled, Element	
850-18	Scott Spray Chamber, Quartz, Water-Cooled, Element	
850-19	Finnigan Neptune Spray Chamber	1127121
850-31	Ball & Socket Elbow, Pyrex	
850-32	Ball & Socket Elbow, Quartz	

### Finnigan Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk
PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk

## ICP & ICP-MS Consumables

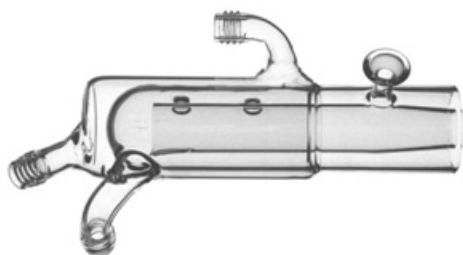
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850-10 - Torch & Injector, TS Sola



850-12 - Demountable Torch, Element, 1091250



850-18 - Scott Spray Chamber, Quartz, Water-Cooled, Element



850-32 - Ball & Socket Elbow, Quartz



852-10 - Quartz Injector, Element, 1122800

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150-05 - Torch, One Piece with Ball Joint, 49.010.100



150-15 - Cyclonic Spray Chamber, 4mm Drain, 31.030.809



160-63 - Sheath Gas, Glass, 21.356.040

## JY/Instruments SA

### Torches & Accessories

150-05	Torch, One Piece with Ball Joint	49.010.100
160-40	Demountable Torch Assembly, Complete	21.356.110
160-45	Demountable Torch, Body Only	
160-50	Outer Quartz Tube, 71mm, Radial	31.023.722
160-51	Outer Quartz Tube, 82.5mm, Radial	
160-70	Outer Quartz Tube, Axial	31.031.099
160-52	Inner Quartz Tube	31.023.723
160-46	O-ring Kit for Torch Body	
160-53	PTFE Centering Ring	31.023.724
160-55	PTFE Insert	31.021.730
160-58	Alumina Injector	31.021.589
160-59	Quartz Injector	
160-60	Quartz Injector, 3.0mm	
160-61	Alumina Injector and Teflon Insert	21.356.130
160-63	Sheath Gas, Glass	21.356.040
160-63S	Sheath Gas, 12/5 Socket	
160-64	Sheath Gas, PEEK	20.925.160

### Spray Chambers & Accessories

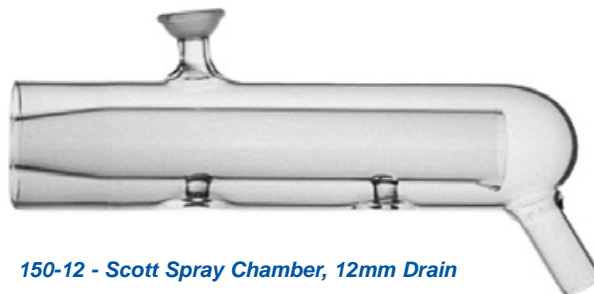
150-12	Scott Spray Chamber, 12mm Drain	
150-12Q	Scott Spray Chamber, 12mm Drain, Quartz	
150-13	Cyclonic Spray Chamber, Axial	
150-14	Scott Spray Chamber, Ground Joint Drain	31.026.996
150-14Q	Scott Spray Chamber, Ground Joint Drain, Quartz	
150-15	Cyclonic Spray Chamber, 4mm Drain	31.031.279
150-15B	Cyclonic Spray Chamber, 4mm Drain, Baffled	31.030.809
150-16	Scott Spray Chamber, 12mm Drain for Concentric Nebulizer	
150-17	Cyclonic Spray Chamber, 12mm Drain	
150-21	Torch Extension	
150-25	Torch Bonnet	49.010.101
160-65	U-Drain Trap	31.026.997

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	47.929.006
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 1mL/min	47.929.001
500-71	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 2mL/min	47.929.002
500-72	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	47.929.003
500-73P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 0.5mL/min	47.929.004
500-92	Crossflow Nebulizer	47.929.008

### JY Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	46.791.022
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	46.791.024
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	46.791.018
PT-2250P	Green-Green, 0.073" (1.85mm), PVC, 12/pk	46.791.016
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	46.791.010
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	46.791.012
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	LK1160497080



150-12 - Scott Spray Chamber, 12mm Drain

## PerkinElmer Plasma 1000, 2000

### Torches & Accessories

310-03	Torch Tube, Type II	N058-0528
310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-24	Quartz Bonnet	N058-2235
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-66	Purge Extension Window	N058-1497

### Spray Chambers & Accessories

300-16	Scott Spray Chamber
300-19	Cyclonic Spray Chamber
300-19J	Cyclonic Spray Chamber, Water-Cooled

### Nebulizers

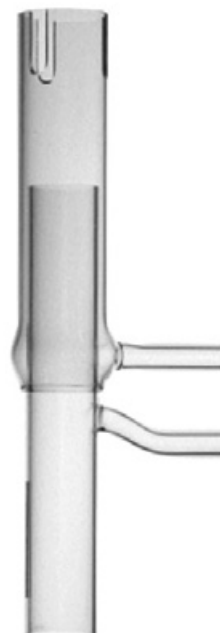
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595

## ICP & ICP-MS Consumables

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310-03 - Torch Tube, Type II, N058-0528



300-19 - Cyclonic Spray Chamber



310-35 - Injector Support Adapter with O-rings, N058-2248

## PerkinElmer Plasma II

### Torches & Accessories

310-03	Torch Tube, Type II	N058-0528
310-09	Torch Tube, Type I, Slotted	N058-0376
310-24	Quartz Bonnet	N058-2235
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-30	Quartz Injector, 1.2mm, Type I	
320-31	Quartz Injector, 1.6mm, Type I	N058-0449
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-66	Purge Extension Window	N058-1497

### Spray Chambers & Accessories

300-16	Scott Spray Chamber
300-19	Cyclonic Spray Chamber
300-19J	Cyclonic Spray Chamber, Water-Cooled

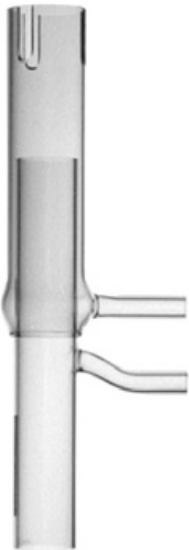
### Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595

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310-03 - Torch Tube,  
Type II, N058-0528



310-35 - Injector  
Support Adapter with  
O-rings, N058-2248



510-26 - Cyclonic  
Spray Chamber, 12/5  
Socket Top, 4mm  
Drain

## PerkinElmer Plasma 40 & 400

### Torches & Accessories

310-03	Torch Tube, Type II	N058-0528
310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-09	Torch Tube, Type I, Slotted (P40)	N058-0376
310-35	Injector Support Adapter with O-rings	N058-2248
310-36	O-ring Kit for Injector Support Adapter	N058-0539
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-60	Purge Extension	N068-1234

### Spray Chambers & Accessories

300-16	Scott Spray Chamber
300-19	Cyclonic Spray Chamber
300-19J	Cyclonic Spray Chamber, Water-Cooled
300-19Q	Cyclonic Spray Chamber, Quartz

### Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376

## PerkinElmer ICP 5000, 5500, 5500B, 6000 & 6500

### Torches & Accessories

300-05	Torch, One Piece with Ball Joint	0047-2048
310-07	Torch Tube, Type I	N058-0233
310-03	Torch Tube, Type II	N058-0528
300-21	Torch Extension	0047-3052
300-22	Torch Extension with Optical Port	
300-23	Torch Extension, Slotted	0047-3560
300-25	Torch Bonnet	0047-2033
320-30	Quartz Injector, 1.2mm, Type I	
320-31	Quartz Injector, 1.6mm, Type I	N058-0449
320-32	Quartz Injector, 2.0mm, Type I	
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-62	Purge Tube	0047-3187
320-64	Purge Tube for Slotted Extension	0047-3561

### Spray Chambers & Accessories

300-12	Scott Spray Chamber	0041-2047
300-14	Scott Spray Chamber for Concentric Nebulizer	
510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	
510-26J	Cyclonic Spray Chamber, Water-Cooled	

### Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550

## PerkinElmer Optima 3000 Series Radial

### Torches & Accessories

310-03W	Torch Tube, Type II, Wear Metals	N068-1690
310-04	Torch Body, Optima, Radial	N069-0568
310-04W	Torch Body, Optima, Radial, Wear Metals	
310-05	Torch Bonnet, Flat Edge (Optima pre-9/94)	N069-5295
310-13	Torch Bonnet, Flat Edge (Optima post 9/94)	N069-5456
320-33	Quartz Injector, 1.2mm	N068-1631
320-43	Quartz Injector, 1.6mm	N069-5448
320-40	Quartz Injector, 2.0mm	N069-5441
320-51	Alumina Injector, 0.85mm	N058-2186
320-52	Alumina Injector, 1.5mm	N058-2185
320-53	Alumina Injector, 2.0mm	N058-2184
320-66	Purge Extension Window	N058-1497

### Spray Chambers & Accessories

300-15	Scott Spray Chamber, Type II, Angled Top
300-16	Scott Spray Chamber, Type II
300-19	Cyclonic Spray Chamber, Optima

### Nebulizers

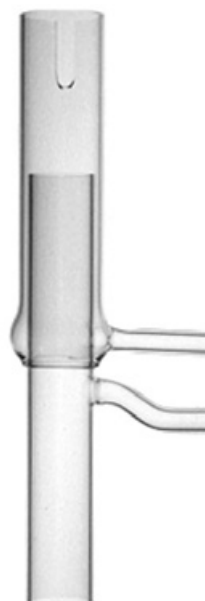
500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595

## ICP & ICP-MS Consumables

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310-04 - Torch Body,  
Optima, Radial,  
N069-0568



300-18DV - Cyclonic  
Spray Chamber,  
N812-2188



310-15 - Torch Bonnet,  
N069-1664

## PerkinElmer Optima 3000 Series XL & SC(X)

### Torches & Accessories

310-11	Torch Body, Optima XL	N069-5379
310-11W	Torch Body, Optima XL, Wear Metals	
310-15	Torch Bonnet	N069-1664
310-37	Injector Support Adapter with O-rings for Optima XL/DV	N069-5400
310-39	Injector Support Adapter with O-rings for Optima XL/DV	N069-0780
320-46	Quartz Injector, 1.2mm	N069-5460
320-44	Quartz Injector, 1.6mm	N069-5449
320-41	Quartz Injector, 2.0mm	N069-5442
320-50	Alumina Injector, 2.0mm	N069-5362
320-65	Purge Viewing Window for Optima XL	0999-2731

### Spray Chambers & Accessories

300-18DV	Cyclonic Spray Chamber	N812-2188
310-38	O-ring Kit - Optima XL/DV	N069-0769

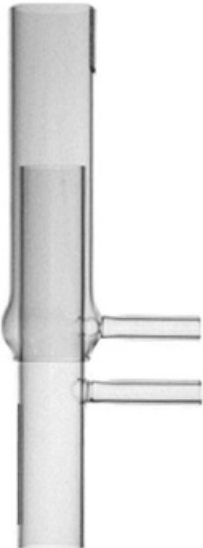
### Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375

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**310-14 - Torch Body,  
Optima DV, 1 Slot,  
N069-1662**



**310-15 - Torch Bonnet,  
N069-1664**



**310-12 - Torch Body,  
Optima DV, 2 Slot**

## PerkinElmer 3000 Series DV

### Torches & Accessories

310-14	Torch Body, Optima DV, 1 Slot	N069-1662
310-14W	Torch Body, Optima DV, 1 Slot, Wear Metals	
310-14/3SL	Torch Body, Optima DV, 3 Slot	
310-12	Torch Body, Optima DV, 2 Slot	
310-12W	Torch Body, Optima DV, 2 Slot, Wear Metals	
310-15	Torch Bonnet	N069-1664
310-37	Injector Support Adapter with O-rings for Optima XL/DV	N069-5400
310-39	Injector Support Adapter with O-rings for Optima XL/DV	N069-0780
320-48	Quartz Injector, 0.8mm	N069-5461
320-46	Quartz Injector, 1.2mm	N069-5460
320-44	Quartz Injector, 1.6mm	N069-5449
320-41	Quartz Injector, 2.0mm	N069-5442
320-50	Alumina Injector, 2.0mm	N069-5362
320-67	Axial Purge Window	B006-6549
320-68	Purge Tube Window, Axial	N069-1678
320-69	Purge Tube Window, Radial	N069-1689
320-73	Purge Tube Window, Radial, Short	N069-0672

### Spray Chambers & Accessories

300-18DV	Cyclonic Spray Chamber	N812-2188
300-18DVJ	Cyclonic Spray Chamber, Water-Cooled	
300-18DVQ	Cyclonic Spray Chamber, Quartz	
310-38	O-ring Kit - Optima XL/DV	N069-0769

### Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

### PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595



**300-18DV - Cyclonic  
Spray Chamber,  
N812-2188**



**310-39 - Injector Support Adapter  
with O-rings for Optima XL/DV  
N069-0780**

# PerkinElmer Optima 2000/4000/5000/7000DV Series & 4300V/5300V

## Torches & Accessories

310-16	Torch Body, Optima 2000/4000/5000/7000DV, 1 Slot	N077-0338
310-16W	Torch Body, Optima 2000/4000/5000/7000DV, Wear Metals	
310-17	Torch Body, Optima 4300V/5300V	N077-1500
310-18	Torch Body, Optima 2000/4000/5000/7000DV, Short Version	N077-0344
310-19	Torch Body, Optima 2000/4000/5000/7000DV, No Slot	N077-0343
310-20	Copper Foil for Torch Body Optima 2000/4000/5000/7000DV	N077-5297
310-25	Torch Bonnet	N077-5289
310-43	O-ring Kit for Optima 2000/4000/5000/7000DV Torch	N077-0437
320-78	Quartz Injector, 0.8mm	N077-5225
320-77	Quartz Injector, 1.2mm	N077-5226
320-76	Quartz Injector, 1.6mm	N077-5223
320-74	Quartz Injector, 2.0mm	N077-5014
320-75	Quartz Injector, 3.0mm	N077-5224
310-40	Alumina Injector, 0.8mm	N077-5227
310-41	Alumina Injector, 1.2mm	N077-5228
310-42	Alumina Injector, 2.0mm	N077-5177
320-54	Alumina Injector, 1.2mm, Optima 4300V/5300V	N077-1531
320-66	Purge Extension Window, Optima 4300V/5300V	N058-1497
320-65	Axial Purge Window, Optima 2000DV	0999-2731
320-67	Axial Purge Window, Optima 4000/5000/7000DV	N077-1116
320-73	Purge Tube Window, Radial, Short, Optima 2000DV	N069-0672
320-80	Radial Purge Window, Optima 4000/5000/7000DV	N077-0322
320-81	Radial Purge Tube, Frosted, Optima 4000/5000/7000DV	N077-0944

## Spray Chambers & Accessories

300-28	Nebulizer Adapter for Cyclonic Spray Chamber	
300-29	Cyclonic Spray Chamber, no Baffle with Nebulizer Adapter	N077-6052
300-30	Cyclonic Spray Chamber, Baffled with Nebulizer Adapter	N077-6053
300-30Q	Cyclonic Spray Chamber, Baffled, Quartz with Nebulizer Adapter	
300-31	Cyclonic Spray Chamber, 4mm Baffle with Nebulizer Adapter	N077-6090
300-32	Cyclonic Spray Chamber, Baffled, Optima 4300V	N077-1501

## Nebulizers

500-70P	C-Type Concentric Nebulizer, 1 lpm Ar, 50psi, 3mL/min	0047-2022
500-77	A-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	0047-2020
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574

## PerkinElmer® Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	N069-1595

## ICP & ICP-MS Consumables

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310-16 - Torch Body, Optima  
2000/4000/5000 DV, 1 Slot,  
N077-0338



310-17 - Torch Body, Optima  
4300V, N077-1500



300-29 - Cyclonic Spray  
Chamber, no Baffle with  
Nebulizer Adapter, N077-6052

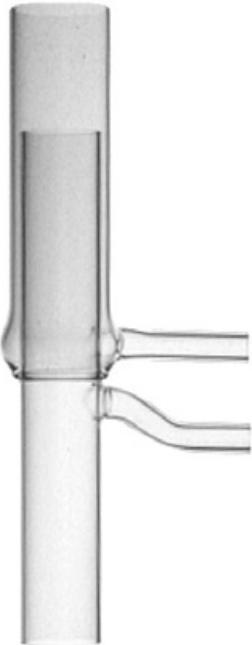


300-32 - Cyclonic Spray  
Chamber, Baffled, Optima 4300V,  
N077-1501





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400-10 - Torch Body, Elan,  
N812-2006



400-30 - Injector, 6100DRC,  
2.0mm, WE02-3948 and 400-37 -  
Injector Support/Torch Base-  
DRC, WE02-3951

## PerkinElmer/SCIEX ELAN 250 & 500

### Torches & Accessories

400-05	Short Form Torch (135mm overall length)	N810-2001
400-07	Long Form Torch (151mm overall length)	N810-2006
400-09	Long Form Torch (150mm overall length)	
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-35	Quartz Injector, 2.0mm	N812-5029
400-25	Torch Bonnet	

## PerkinElmer/SCIEX ELAN 5000/6X00/9000/DRC II

### Torches & Accessories

400-10	Torch Body, Elan	N812-2006
400-10HE	Torch Body, High Efficiency	W100-8384
320-33	Quartz Injector, 1.2mm	N068-1631
320-34	Quartz Injector, 1.6mm	0047-3292
320-35	Quartz Injector, 2.0mm	N812-5029
320-51	Alumina Injector, 0.85mm	N812-6039
320-52	Alumina Injector, 1.5mm	N812-6040
320-53	Alumina Injector, 2.0mm	N812-6041
400-31	Quartz Injector, 0.85mm, DRC	WE02-7030
400-32	Quartz Injector, 1.5mm, DRC	WE02-7005
400-30	Quartz Injector, 2.0mm, DRC	WE02-3948
400-35	Injector Support/Torch Base	N812-0116
400-37	Injector Support/Torch Base, DRC	WE02-3951

### Spray Chambers & Accessories

300-19MS	Cyclonic Spray Chamber	N812-0150
300-19MSJ	Cyclonic Spray Chamber, Water-Cooled	
300-19MSQ	Cyclonic Spray Chamber, Quartz	
300-19MSQJ	Cyclonic Spray Chamber, Quartz, Water-Cooled	
300-19MSQB	Cyclonic Spray Chamber, Quartz, Baffled	
400-20	Cyclonic Spray Chamber, Quartz, DRC	WE02-5221
400-20J	Cyclonic Spray Chamber, Quartz, DRC, Water-Cooled	
400-36	Sciex O-ring Adapter Kit	N812-0100
400-38	Sciex O-ring Adapter Kit, DRC	
400-12	Scott Spray Chamber	
400-13	Scott Spray Chamber, Quartz	
400-14	Scott Spray Chamber, Water-Cooled	WE01-3829
400-16	Scott Spray Chamber, Water-Cooled, Quartz	

### Nebulizers

500-70M	C-Type Concentric Nebulizer, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min)	N810-2012
500-72	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min	N810-2011
500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	N068-1574
500-77Q	A-Type Concentric Nebulizer, 1 lpm, 30psi, 3mL/min, Quartz	WE02-4371
500-70QQDAC	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min, Quartz, Quick Disconnect, Argon Connect	

### PerkinElmer® Sciex Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	0990-8587
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	N068-0375
PT-2300P	Black-White, 0.125" (3.18mm), PVC, 12/pk	N812-2012
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	0047-3550
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	N068-0376
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk	0047-3552
PT-2290SA	Violet-White, 0.110" (2.79mm), Santoprene, 12/pk	N812-2252

# Spectro Modula, CIROS, Genesis, & ARCOS

## SOP Torches

750-07	Torch, Fixed, 1.0mm	48205001
750-05	Torch, Fixed, 1.8mm, Standard	
750-05F	Torch, Fixed, 1.8mm, Standard with Fittings	75060596
750-08	Torch, Fixed, 2.5mm	
750-06	Demountable Torch, Spectroflame	48206002
750-49	Fixed Sheath Gas System Torch, 3.0 mm	
750-49F	Fixed Sheath Gas System Torch, 3.0 mm with Fittings	75260533

## EOP Torches

750-41	Flared End Torch, 1.8mm	48105052A
750-41F	Flared End Torch, 1.8mm with Fittings	75160592
750-40	Flared End Torch, 2.5mm	48105052
750-40F	Flared End Torch, 2.5mm with Fittings	75160526
750-42	Demountable Torch	48206007
750-44	Demountable Flared End Torch	
750-47	Fixed Sheath Gas System Torch, 1.8 mm	
750-47F	Fixed Sheath Gas System Torch, 1.8 mm with Fittings	75160549
750-48	Fixed Sheath Gas System Torch, 3.0 mm	
750-48F	Fixed Sheath Gas System Torch, 3.0 mm with Fittings	75160537

## Torch Accessories

750-21	Quartz Injector, 1.5mm, Standard	48105008
750-22	Quartz Injector, 1.8mm, Standard	48105010
750-23	Quartz Injector, 2.5mm, Standard	48105009
750-46	Quartz Injector, 2.5mm, EOP/Standard	48105058
750-55	Gas Adapter	

## Spray Chambers & Accessories

750-10	Conical Spray Chamber, Slurry, Open End	
750-12	Conical Spray Chamber, Vertical Exit, Open End	48105003
750-13	Scott Spray Chamber, Double Pass, 90° Exit	48105051
750-14	Scott Spray Chamber, Double Pass, Large	48105006
750-15	Cyclonic Spray Chamber, Gravity Drain	
750-16	Cyclonic Spray Chamber, MLN, Gravity Drain	
510-27	Cyclonic Spray Chamber, MLN, Pump Drain	48105061
750-17	Elbow Adapter, EOP Torch to Spray Chamber	48105062
750-18	Elbow Adapter, EOP Torch to Slurry Spray Chamber	48105002
750-30	Spectro Drain Pressure Lock	

## Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	76060510
500-92S	Crossflow Nebulizer, 34mm	75060502
510-20S	Modified Lichte MDSN Nebulizer, 1 lpm Ar	48205036
510-20SF	Modified Lichte MDSN Nebulizer, 1 lpm Ar, with Fittings	76060529
520-30S	PTFE End Cap for use with 34mm Open End Spray Chamber	75060522
520-32S	O-ring for 500-92S	
750-93	O-ring for Crossflow Nebulizer (OEM Replacement)	

## Spectro Type 2-Stop Pump Tubing

PT-2080P	Orange-Green, 015" (.38mm), PVC, 12/pk	47201037
PT-2120P	Orange-White, 0.025" (.64mm), PVC, 12.pk	47101001
PT-2140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	47101003
PT-2150P	White-Black, 0.037" (.95mm), PVC, 12/pk	47101004
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	47501010
PT-2220P	Yellow-Blue, 0.06" (1.52mm), PVC, 12/pk	47101006
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	47101014
PT-2240P	Blue-Green, (1.75mm), PVC, 12/pk	47101005
PT-2080SV	Orange-Green, 015" (.38mm), Solva, 12/pk	47501016
PT-2140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	47501018

## ICP & ICP-MS Consumables

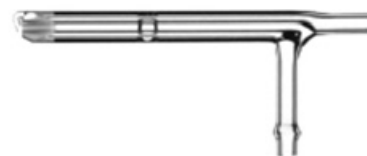
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750-40 - EOP Flared End Torch, 2.5mm, 48105052



750-12 - Small Upward Conical Spray Chamber, 48105003



510-20S - Modified Lichte Nebulizer (MLN), 1 lpm, Ar, 48205036



250-08 - Torch



250-25 - Torch Bonnet,  
190400-75



500-92 - Crossflow Nebulizer,  
126989-00

## Thermo Scientific - TJA 2000-2400 Series

### Torches & Accessories

250-08	Torch	
250-25	Torch Bonnet	190400-75

### Spray Chambers & Accessories

120-56	O-ring for Spray Chamber, PTFE Coated Viton	
250-16	Scott Spray Chamber, Standard	127947-00
250-30	Aerosol Baffle for 250-16	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	
510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	

### Nebulizers

500-92	Crossflow Nebulizer	126989-00
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

### TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3120SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00



285-01 - Rinse Station  
1 Port, 12mm



285-02 - Rinse Station  
2 Port, 12mm



285-03 - Rinse Station  
2 Port, 23mm

# Thermo Scientific - TJA 975, 9000, 61 & 1100

## Torches & Accessories

250-05	Demountable Torch with Removable 1.0mm Tip	190400-54
250-05-A	Demountable Torch with 1 Extra Removable 1.0mm Tip	
250-05-B	Demountable Torch with 2 Extra Removable 1.0mm Tips	
250-05-C	Demountable Torch with 3 Extra Removable 1.0mm Tips	
250-05W	Demountable Torch with Removable 1.0mm Tip, Wear Metals	
250-06	Demountable Torch with Removable 1.25mm Tip	
250-06-A	Demountable Torch with 1 Extra Removable 1.25mm Tip	
250-06-B	Demountable Torch with 2 Extra Removable 1.25mm Tips	
250-06W	Demountable Torch with Removable 1.25mm Tip, Wear Metals	
250-07	Demountable Torch with Removable 1.5mm Tip	
250-07-A	Demountable Torch with 1 Extra Removable 1.5mm Tip	
250-07-B	Demountable Torch with 2 Extra Removable 1.5mm Tips	
250-09	Demountable Torch with Removable 1.7mm Tip	
250-21	Torch Extension	
250-22	Torch Extension with Optical Port	
250-25	Torch Bonnet	190400-75
260-55	Demountable Torch with Removable Tip, High Solids	
260-62	TJA Standard Low Flow Torch	
260-81	Alumina Injector Tube 1.5mm	136436-02
260-82	HF/CR Torch Body for Alumina/Sapphire Injector	
260-85	PTFE Injector Holder	

## Spray Chambers & Accessories

250-12	Scott Spray Chamber	190400-65
250-18	Scott Spray Chamber, Curved Drain	
250-20	Scott Spray Chamber, Open Ends, Water-Cooled	
250-20R	O-ring for Scott Spray Chamber, Water-Cooled	
250-30	Aerosol Baffle for 250-12 & 250-18	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

## Nebulizers

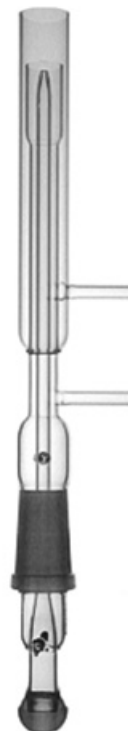
500-92	Crossflow Nebulizer	126989-00
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

## TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3210SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00

## ICP & ICP-MS Consumables

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250-05 - Demountable Torch with Removable 1.0mm Tip, 190400-54



250-12 - Scott Spray Chamber, 190400-65



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275-07 - Ceramic Base Torch,  
High Flow with 1.5mm Injector,  
126432-01

### Did you know...

**Ceramic base torches** for TJA instruments may be rebuilt multiple times at a very moderate price. Available with or without a new injector, rebuilt torches receive new precision bore quartz inner and outer tubes and new argon fittings. Furthermore, our rebuilt torches are subjected to the same QC program as our new torches. So before you throw away your next broken ceramic base torch, consider having us rebuild it. After all, it can only save you money.

## Thermo Scientific - TJA 61E, Iris Advantage Radial, Intrepid Radial, Intrepid II Radial

### Torches & Accessories

275-06	Ceramic Base Torch, High/Low Flow with 1.5mm Injector	126432-02
275-06W	Ceramic Base Torch, High/Low Flow, 1.5mm Inj., Wear Metals	
275-06W/O	Ceramic Base Torch, High/Low Flow without Injector	126440-02
275-07	Ceramic Base Torch, High Flow with 1.5mm Injector	126432-01
275-07HF	Ceramic Base Torch, High Flow with 1.5mm Alumina Injector	127179-01
275-07W/O	Ceramic Base Torch, High Flow without Injector	126440-01
275-08	Ceramic Base Torch, High Flow with 1.0mm Injector, Organics	125124-01
275-08W/O	Ceramic Base Torch, High Flow without Injector	126440-01
275-09	Ceramic Base Torch, Slotted with 1.5mm Injector	126432-04
275-09W/O	Ceramic Base Torch, Slotted without Injector	126440-06
250-40	Quartz Injector, 1.0mm	125407-01
250-41	Quartz Injector, 1.5mm	125407-00
250-42	Quartz Injector, 2.0mm	136502-01
250-43	Quartz Injector, 2.4mm	136502-02
254-45	O-ring for Injector Tube	125847-00
260-83	Alumina Injector, 1.5mm	136436-01
260-84	Alumina Injector, 1.0mm	
275-20	TJA PTFE Adapter, Torch	
275-25	Anti-arc Cap	085207-00
275-26	Anti-arc Cap, Flat Edge	085207-01
275-35	Argon Fittings for Ceramic Base Torches	

### Spray Chambers & Accessories

250-19	Spray Chamber, Open End	130089-00
250-30	Aerosol Baffle for 250-19	003952-00
275-14	Cyclonic Spray Chamber, Radial, Pump	139663-00
275-18	Cyclonic Spray Chamber, Radial, Pump	140542-00
275-19	Cyclonic Spray Chamber, 10mm Drain	136105-00
275-19J	Cyclonic Spray Chamber, Water-Cooled, 10mm Drain	
275-21	Conical Spray Chamber	139219-00
275-53	Conical Spray Chamber, Water-Cooled	139123-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

### Nebulizers

500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	134365-00
500-92	Crossflow Nebulizer	126989-00
510-10	Noordermeer V-Groove MDSN Nebulizer	080963
520-30	PTFE End Cap for use with 35mm Open End Spray Chambers	
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

### TJA® Type 3-Stop Pump Tubing

PT-3020P	Orange-Red-Orange, .0075" (.19mm), PVC, 12/pk	
PT-3080P	Orange-Green-Orange, .015" (.38mm), PVC, 12/pk	130177-06
PT-3140P	Orange-Orange, 0.035" (.89mm), PVC, 12/pk	130177-00
PT-3180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk	130177-01
PT-3140SI	Orange-Orange, 0.035" (.89mm), Silicone, 6/pk	130177-02
PT-3180SI	Red-Red, 0.045" (1.14mm), Silicone, 6/pk	130177-03
PT-3140SV	Orange-Orange, 0.035" (.89mm), Solva, 12/pk	131731-02
PT-3180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk	78532
PT-3210SV	Yellow-Yellow, 0.056" (1.42mm), Solva, 12/pk	78530
PT-3230SV	Blue-Blue, 0.065" (1.65mm), Solva, 12/pk	131731-00
PT-3260SV	Purple-Purple, 0.080" (2.06 mm), Solva, 12/pk	131731-01
PT-3140V	Orange-Orange, 0.035" (.89mm), Viton, 6/pk	130177-04
PT-3180V	Red-Red, 0.045" (1.14mm), Viton, 6/pk	130177-05
PT-3210V	Yellow-Yellow, 0.056" (1.42mm), Viton, 12/pk	
ISMK-101	Internal Standard Mixing Kit, 5/pk, This product allows for simultaneous introduction of sample and internal standard.	136708-00

## Thermo Scientific - TJA 61E Trace, Iris AP, Intrepid, Intrepid II

### Torches & Accessories

275-10	Ceramic Base Torch, Trace with 1.5mm Injector	126432-03
275-10W/O	Ceramic Base Torch, Trace without Injector	126440-03
275-10HF	Ceramic Base Torch, Trace with 1.5mm Alumina Injector	138566-03
275-10DV	Ceramic Base Torch, DV with 1.5mm Injector	
275-10DVKIT	Ceramic Base Torch, DV, 1.5mm Injector, Optic Sleeve, Seal	138562-00
275-10DVW/O	Ceramic Base Torch, DV without Injector	126440-05
250-23	Optic Sleeve for DV Torch	137689-00
250-24	Seal for Optic Sleeve - Duo Torch	137688-00
250-26	Duo Torch Sleeve and Seal Kit	138563-00
250-40	Quartz Injector, 1.0mm	125407-01
250-41	Quartz Injector, 1.5mm	125407-00
250-42	Quartz Injector, 2.0mm	136502-01
250-43	Quartz Injector, 2.4mm	136502-02
260-83	Alumina Injector, 1.5mm	136436-01
260-84	Alumina Injector, 1.0mm	
275-20	PTFE Adapter, Torch to Cyclonic Spray Chamber	

### Spray Chambers & Accessories

275-13	Cyclonic Spray Chamber, Axial, Pump	139662-00
275-15	Cyclonic Spray Chamber, Gravity Drain, Trace	134620-00
275-16	Cyclonic Spray Chamber, Axial, Gravity Drain	136120-00
250-19	Spray Chamber, Open End	130089-00
250-30	Aerosol Baffle for 250-19	003952-00
285-01	Rinse Station 1 Port, 12mm	
285-02	Rinse Station 2 Port, 12mm	
285-03	Rinse Station 2 Port, 23mm	

### Nebulizers

500-80	K-Type Concentric Nebulizer, 0.7 lpm Ar, 30psi, 3mL/min	134365-00
500-92	Crossflow Nebulizer	126989-00
510-10	Noordermeer V-Groove MDSN Nebulizer	080963
520-30	PTFE End Cap for use with 35mm Open End Spray Chambers	
520-36	O-ring Kit for 500-92	133202-50
520-38	Argon Inlet Fittings for 500-92	

### TJA® Type 3-Stop Pump Tubing

See opposite page for complete list of TJA® Type Pump tubing.

## ICP & ICP-MS Consumables

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**275-10DV - Ceramic Base  
Torch, DV with 1.5mm Injector**



**275-15 - Cyclonic Spray  
Chamber, Gravity Drain, Trace,  
134620-00**

### Determining the Correct Replacement TJA Ceramic Base Torch and Injector

Follow the charts below to identify which torch and injector you have and the correct replacement part number from Precision Glassblowing of Colorado.

#### Ceramic Base Torches

TJA Part #	Rings on Outer Tube of Torch	Rings on Injector (Center Tube)	Precision Part #
126432-02	1 Red Ring, Approx. 63mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-06
126432-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-07
127179-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.5mm Alumina Injector, No Ring	275-07HF
125124-01	2 Red Rings, Approx. 63mm Long Outer Tube	1.0mm Injector, 2 Red Rings	275-08
126432-03	2 Red Rings, Approx. 136mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-10
138562-00	2 Red Rings, Hole for Radial Viewing, Approx. 136mm Long Outer Tube	1.5mm Quartz Injector, 1 Red Ring	275-10DV

#### Injectors

TJA Part #	Rings on Injector (Center Tube)	Precision Part #
125407-01	Quartz, 1.0mm bore, 2 Red Rings	250-40
125407-00	Quartz, 1.5mm bore, 1 Red Ring	250-41
136502-01	Quartz, 2.0mm bore, 1 Blue Ring	250-42
136502-02	Quartz, 2.4mm bore, 2 Blue Rings	250-43
N/A	Alumina, 1.0mm bore, No Rings	260-84
136463-01	Alumina, 1.5mm bore, No Rings	260-83

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450-05 - Torch, 1.5mm,  
3201192



450-13 - Conical Spray  
Chamber with Impact  
Bead, Quartz, 3600170



450-28 - Torch Bonnet,  
72mm, 3204703

## Thermo Scientific - VG PQ 1-3, Axiom, PQ ExCell

### Torches & Accessories

450-05	Torch, 1.5mm	3201192
450-06	Torch, 2.0mm	3201732
450-08	Torch Body, Demountable	1200080
450-09	Quartz Injector	
450-10	Torch Body, Demountable with Quartz Injector	
450-11	Alumina Injector	1200079
450-12	Torch Body, Corrosion Resistant	3203095
450-21	Torch Extension	
450-25	Torch Bonnet	
450-26	Torch Bonnet Cap	1200274
450-27	RF Insulator Shield	3203025
450-28	Torch Bonnet, 72mm	3204703
450-29	Torch Shield	3203789

### Spray Chambers & Accessories

450-13	Conical Spray Chamber with Impact Bead, Quartz	3600170
450-14	Conical Spray Chamber with Impact Bead for Concentric Neb.	
450-15	Scott Spray Chamber, Water-Cooled, Pyrex	
450-16	Scott Spray Chamber, Water-Cooled, Quartz	3200841
450-17	Conical Spray Chamber, Water-Cooled for Maxim	3203739
450-22	Conical Spray Chamber, Water-Cooled, Pyrex	3204313
450-22Q	Conical Spray Chamber, Water-Cooled, Quartz	3600374
450-30	Elbow for use with 450-13, Quartz	3600169
450-31	Elbow, Ball & Socket, Pyrex	
450-32	Elbow, Ball & Socket, Quartz	3200727

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	1040894
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### Accessories

450-18	Clamp, Stainless Steel, #12	1201261
450-18L	Clamp, Stainless Steel, #12 with Lock	
450-19	Clamp, Stainless Steel, #18	1202081
450-36	UV Laser Sample Cell	3007383
450-40	Probe UV Laser Sample Cell	3201104
450-42	Micro Probe UV Laser Sample Cell	
450-43	Quartz Sleeve	3202287
450-44	Quartz Tube	3201759
450-45	Quartz Sleeve, #2	3200176
450-46	Quartz Sleeve, Silica	3201070
450-49	Quartz Socket Tube Adapter	3200004
450-51	Glass Probe	1041167

### VG Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk
PT-2180P	Red-Red, 0.045" (1.14mm), PVC, 12/pk
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk
PT-2180SV	Red-Red, 0.045" (1.14mm), Solva, 12/pk
PT-2130SI	Black-Black, 0.030" (.76mm), Silicone, 6/pk
PT-2020P	Orange-Red, .0075" (.19mm), PVC, 12/pk
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk

# Varian 700-ES Series, Liberty, Vista

## Torches & Accessories, Radial

800-05	Low Flow Torch, One Piece, Radial	20-100696-90
800-05B	Low Flow Torch, One Piece, Radial with Ball Joint,	20-100696-90B
800-05S	Low Flow Torch, One Piece, Radial with Socket	
800-08	Extended for Nitrogen Determination	20-100764-00
800-10	Torch, Demountable, Body Only, Radial	20-100729-00
800-25	Torch Bonnet	20-100707-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-00
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-50	Demountable Torch, Complete Kit for Radial (800-10,-45,-48)	99-100568-00

## Torches & Accessories, Axial

800-12	Low Flow Torch, One Piece, Axial, 90° Bend	20-100904-00
800-12B	Low Flow Torch, One Piece, Axial, 90° Bend with Ball Joint	
800-12S	Low Flow Torch, One Piece, Axial, 90° Bend, 12/5 Socket	
800-14	Low Flow Torch, One Piece, Axial	20-100812-00
800-15	Torch, Demountable, Body Only, Axial	20-100834-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm, 3/pk	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-90
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-49	Demountable Torch, Complete Kit for Axial (800-15, -45, -48)	99-100847-00

## Spray Chambers & Accessories

800-20	Transfer Tube, Torch to Spray Chamber	
800-21	Cyclonic Spray Chamber, 8mm Top, 4mm Drain	20-100817-00
800-21B	Cyclonic Spray Chamber, 8mm Top, 4mm Drain, Baffle	79-100437-00
800-17	Sturman-Masters Spray Chamber, Water-Cooled	99-100704-00

## Nebulizers

500-70	C-Type Concentric, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-70MQDAC	C-Type Concentric, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect, Argon Connect	20-101021-00
500-65QDAC	K-Type Concentric, 30 psi, 2 mL/min, Quick Disconnect, Argon Connect	20-100964-00
500-80	K-Type, 0.7 lpm Ar, 30psi, 3mL/min	20-100695-00
500-80QDAC	K-Type, 30psi, 3mL/min Quick Disconnect, Argon Connect	20-101068-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
510-10	Noordermeer V-Groove MDSN Nebulizer	
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

## Varian® Type 2-Stop Pump Tubing

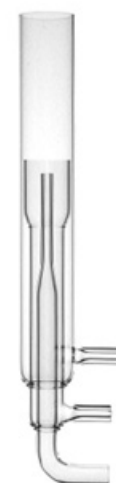
PT-2120P	Orange-White, 0.025" (.64mm), PVC, 12/pk	37-100469-00
PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	37-100272-00
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	37-100344-00
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100345-00
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	37-100346-00
PT-2270P	Purple-Black, 0.090" (2.29mm), PVC, 12/pk	37-100273-00
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	37-100348-00
PT-2160SV	White-White, 0.040" (1.02mm), Solva, 12/pk	37-100350-00
PT-2200SV	Gray-Gray, 0.050" (1.30mm), Solva, 12/pk	37-100352-00
PT-2100SA	Orange-Yellow, 0.020" (.51), Santoprene, 12/pk	37-100440-00
PT-2130SA	Black-Black, 0.030" (.76mm), Santoprene, 12/pk	37-100441-00
PT-2160SA	White-White, 0.040" (1.02mm), Santoprene, 12/pk	37-100442-00
PT-2200SA	Gray-Gray, 0.050" (1.30mm), Santoprene, 12/pk	37-100443-00
PT-2230SA	Blue-Blue, 0.065" (1.65mm), Santoprene, 12/pk	37-100444-00
PT-2100V	Orange-Yellow, 0.020" (.51mm), Viton, 12/pk	37-100435-00
PT-2130V	Black-Black, 0.030" (.76mm), Viton, 12/pk	37-100436-00
PT-2160V	White-White, 0.040" (1.02mm), Viton, 12/pk	37-100437-00
PT-2200V	Gray-Gray, 0.050" (1.30mm), Viton, 12/pk	37-100438-00
PT-2230V	Blue-Blue, 0.065" (1.65mm), Viton, 12/pk	37-100439-00

## ICP & ICP-MS Consumables

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800-05 - Low Flow Torch, One Piece, Radial, 20-100696-90



800-12 - Low Flow Torch, One Piece, Axial, 90° Bend, 20-100904-00



800-21 - Cyclonic Spray Chamber, 8mm Top, 4mm Drain, 20-100817-00



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**800-34 - ICP-MS Torch  
with Placement Posts,  
20-101007-00**



**800-33 - ICP-MS Spray  
Chamber,  
20-101010-00**

## Varian UltraMass-700

### Torches & Accessories

800-06	Torch, One Piece, Low Flow	20-100783-00
800-11	Torch, Demountable, Body Only	20-100793-00
800-41	Quartz Injector, 1.8mm	20-100730-00
800-42	Quartz Injector, 0.8mm, 3/pk	20-100775-00
800-45	Alumina Injector, 1.8mm	24-100675-90
800-46	Alumina Injector, 2.5mm	
800-48	PTFE Injector Holder	99-100573-00
800-51	Demountable Torch, Complete (800-11, -45, -48)	99-100717-00

### Spray Chambers & Accessories

510-26	Cyclonic Spray Chamber, 12/5 Socket Top, 4mm Drain	
800-17	Sturman-Masters Spray Chamber, Water-Cooled	99-100704-00
800-21	Cyclonic Spray Chamber, 8mm Top, 4mm Drain	20-100817-00

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

## Varian 800-MS Series

### Torches & Accessories

800-34	ICP-MS Torch with Placement Posts	20-101007-00
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### Spray Chambers & Accessories

800-31	ICP-MS Sheath Bypass	20-101008-00
800-32	ICP-MS Sheath Gas Port	20-101009-00
800-33	ICP-MS Spray Chamber	20-101010-00

### Nebulizers

500-70	C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 1mL/min	20-100765-00
500-70MQDAC	C-Type Concentric, 1 lpm, 30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect, Argon Connect	20-101021-00
500-85	K-Type, High Flow Concentric Nebulizer	20-100816-00
800-55	High Solids V-groove Nebulizer, 0.7 lpm Ar, 35psi	99-100574-00

## Varian ICP-MS Type 2-Stop Pump Tubing

PT-2130P	Black-Black, 0.030" (.76mm), PVC, 12/pk	37-100272-00
PT-2160P	White-White, 0.040" (1.02mm), PVC, 12/pk	37-100344-00
PT-2200P	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100345-00
PT-2230P	Blue-Blue, 0.065" (1.65mm), PVC, 12/pk	37-100346-00
PT-2270P	Purple-Black, 0.090" (2.29mm), PVC, 12/pk	37-100273-00
PT-2130SV	Black-Black, 0.030" (.76mm), Solva, 12/pk	37-100348-00
PT-2160SV	White-White, 0.040" (1.02mm), Solva, 12/pk	37-100350-00
PT-2200SV	Gray-Gray, 0.050" (1.30mm), PVC, 12/pk	37-100352-00
PT-2100SA	Orange-Yellow, 0.020" (.51mm), Santoprene, 12/pk	37-100440-00
PT-2130SA	Black-Black, 0.030" (.76mm), Santoprene, 12/pk	37-100441-00
PT-2160SA	White-White, 0.040" (1.02mm), Santoprene, 12/pk	37-100442-00
PT-2200SA	Gray-Gray, 0.050" (1.30mm), Santoprene, 12/pk	37-100443-00
PT-2230SA	Blue-Blue, 0.065" (1.65mm), Santoprene, 12/pk	37-100444-00

## Specialty ICP Items

### Torches & Accessories

550-05	1 Piece Torch, Beveled End, 1.0 Injector	318-0016
550-06	1 Piece Torch, Beveled End, 1.5 Injector	
550-20	1 Piece Torch with Ball Joint, Aqueous	120-3748
550-20F	1 Piece Torch with Ball Joint, Aqueous with Fittings	120-00336-1
550-22	1 Piece Torch with Ball Joint, Organics	120-3749
550-22F	1 Piece Torch with Ball Joint, Organics with Fittings	120-00336-2
550-22W	1 Piece Torch with Ball Joint, Organics, Wear Metals	
550-23	Argon Hose and Fitting for Torch	
550-43	Demountable Torch	318-0001
550-50	Aqueous Torch, Axial, 190mm Long	318-00062
550-64	Aqueous Torch, Axial	120-00200-1
550-64F	Aqueous Torch, Axial with Fittings	120-00309-1
550-65	Aqueous Torch, Axial, Dual View	318-00065
550-65F	Aqueous Torch, Axial, Dual View with Fittings	120-00309-2
550-69	Demountable Torch, Axial, Aqueous	318-00069
550-70	Demountable Torch, Dual View, Aqueous	318-00070
550-45	Quartz Injector	318-0004
550-94	Torch, Axial, 2.5mm Injector	
550-94F	Torch, Axial, 2.5mm Injector, with Argon Fittings and Restrictor	
550-95	Torch, DV, 2.5mm Injector	
550-95F	Torch, DV, 2.5mm Injector, with Argon Fittings and Restrictor	

### Spray Chambers & Accessories

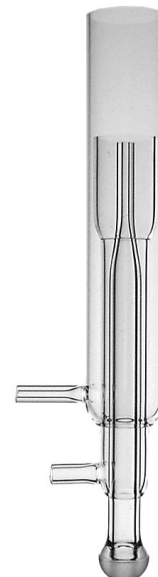
550-24	Hose and Fitting for Spray Chamber	
550-25	Spray Chamber, Scott, Radial	120-3751
550-25J	Spray Chamber, Scott, Radial, Water Cooled	
550-27	Cyclonic Spray Chamber, Radial, Hildebrand Grid	
550-37	Cyclonic Spray Chamber, Radial, Concentric	
550-38	Cyclonic Spray Chamber, Axial, Long Neck with Knockout Tube	
550-39	Cyclonic Spray Chamber, Axial, Long Neck without Knockout Tube	
550-55	Spray Chamber, Scott, Axial	120-00201-1
550-57	Cyclonic Spray Chamber, Axial, Concentric	
550-58	Cyclonic Spray Chamber, Axial, Hildebrand Grid	
550-60	Quartz Purge Window	
550-66	Purge Tube, Axial, Quartz	318-00066
550-67	Purge Tube, V2, Dual View	318-00067
550-68	Purge Tube, Radial	318-00068

### Specialty 2-Stop Pump Tubing

PT-2140P	Orange, 0.020", PVC, 12/pk	309-3551
PT-2130P	Black, 0.030", PVC, 12/pk	309-3552
PT-2180P	Red, 0.045", PVC, 12/pk	309-3538

## ICP & ICP-MS Consumables

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550-20 - 1 Piece Torch  
with Ball Joint,  
Aqueous, 120-3748



510-26T - Cyclonic  
Spray Chamber, PTFE

## Spray Chambers

### Spray Chambers & Accessories

510-26	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain	
510-26J	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Water Cooled	
510-26NB	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, No Baffle	
510-26Q	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Quartz	
510-26QJ	Cyclonic Spray Chamber, 12/5 Socket, 4mm Drain, Quartz, Water Cooled	
510-26T	Cyclonic Spray Chamber, PTFE	
510-26U	Cyclonic Spray Chamber, Ultem	
510-27	Cyclonic Spray Chamber for Modified Lichte	
510-27J	Cyclonic Spray Chamber for Modified Lichte, Water Cooled	
510-27Q	Cyclonic Spray Chamber for Modified Lichte, Quartz	
510-30	Mini Cyclonic Spray Chamber	

## Nebulizers

### About our Nebulizers

Precision Glassblowing of Colorado offers the widest range of nebulizers available anywhere including exclusive rights to the world renowned Noordermeer V-groove and the patented Modified Lichte. Other companies may offer similar nebulizers but there are no substitutes for the originals. Furthermore with an ICP on site, every nebulizer is tested as part of our stringent Quality Assurance/Quality Control program.

### Concentric Nebulizers

In the mid-1970's, the glass concentric nebulizer was introduced to the world and was shown to be a major improvement over nebulizers available at the time. For over 30 years, the common concentric nebulizer has remained virtually unchanged and is available most anywhere. Precision Glassblowing of Colorado has been offering Pyrex and quartz concentric nebulizers since 1987 but we have spent nearly 10 years developing a revolutionary Zero-Dead-Volume design for optimal sample transport in our glass concentric nebulizers. The design offers not only great performance but also unparalleled consistency and stability. Manufactured by our master glassblowers, we can offer most any combination of standard Argon flow, PSI, and sample flow rate. With our "QD" and "AC" fittings for sample and argon connections, it takes just moments to replace an old nebulizer. So, the next time you are looking for a concentric nebulizer, discover what the top instrument manufacturers have known for years.

### Choosing the Right Nebulizer

Depending on what types of analyses you are performing and the various matrices, choosing the right nebulizer can be the difference between good results and great results. The chart on the opposite page gives a brief overview of the various nebulizers available from Precision Glassblowing of Colorado. If you cannot find what you are looking for feel free to give us a call and someone from our knowledgeable staff will be more than happy to work with you and answer any questions you may have.

# Nebulizers

Nebulizer Type	Material/Chemical Resistance	Application	Sensitivity
<p style="text-align: center;"><b>Crossflow</b> <i>pg. 29</i></p>	<p>PVDF fluorinated polymer; Good chemical resistance for most acids and organic solvents</p>	<p>For use with Scott style spray chambers; High stability; Great high-solids capability</p>	<p>Moderate sensitivity due to wide range of droplet size</p>
<p style="text-align: center;"><b>Noordermeer V-Groove</b> <i>pg. 29</i></p>	<p>Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF</p>	<p>For use with Scott style and cyclonic spray chambers; Great high-solids capability; Same principle as Babington</p>	<p>Moderate to high sensitivity for a high-solids nebulizer; Better efficiency compared to Babington V-groove</p>
<p style="text-align: center;"><b>Modified Lichte</b> <i>pg. 29</i></p>	<p>Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF</p>	<p>For use with Modified Lichte spray chamber; Unique patented design; Great high-solids capability</p>	<p>Great sensitivity; Patented design with impingement bead to further atomize aerosol resulting in uniform droplet size</p>
<p style="text-align: center;"><b>Glass Concentric</b> <i>pg. 28</i></p>	<p>Quartz or Pyrex; Good for most acids and organic solvents; Not recommended for HF</p>	<p>For use with Scott style and cyclonic spray chambers; Not recommended for high-solids applications</p>	<p>Great sensitivity due to uniform droplet size inherent in the concentric design</p>
<p style="text-align: center;"><b>Burgener Mira Mist &amp; Ari Mist</b> <i>pg. 30</i></p>	<p>Teflon; can be used for any liquid. PEEK; Good chemical resistance for most acids and organic solvents.</p>	<p>For use with Scott style and cyclonic spray chambers: Great high-solids capability.</p>	<p>Great Sensitivity; enhanced parallel path design improves upon original Babington V-groove.</p>

## ICP & ICP-MS Consumables

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**500-92 - Crossflow Nebulizer**



**510-10 - Noordermeer V-Groove MDSN Nebulizer**



**510-20S - Modified Lichte MDSN Nebulizer, 1 lpm Ar**



**500-72 - C-Type Concentric Nebulizer, 1 lpm Ar, 30psi, 3mL/min**



**TMM 3500 - Teflon Mira Mist**

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500-70 - 30psi, 1mL/min



500-72QD - 30psi, 3mL/min,  
Quick Disconnect



500-80QDAC - 30psi, 3mL/min,  
Quick Disconnect, Argon  
Connect



500-QD - Quick Disconnect for  
Nebulizer, Teflon with PFA  
Capillary Tubing



500-AC - Argon Connect for  
Concentric Nebulizers Includes  
Insert and Body

## Glass Concentric Nebulizers

Concentric nebulizers sample uptake rates are as follows:

Sample flow rate (mL/min)	Accepted range (mL/min)
Micro	0.1-0.4
1.0	0.5-1.4
2.0	1.5-2.4
3.0	2.5-3.4
Argon Pressure (psi)	Accepted range (psi)
30	28-38
50	45-55

### Aerosalt - High Solids, 0.7 lpm Ar

500-65QD 30 psi, 2 mL/min, Quick Disconnect

500-65QDAC 30 psi, 2 mL/min, Quick Disconnect, Argon Connect

### C-Type, 1.0 lpm Ar

500-70 30psi, 1mL/min

500-70M 30psi, Microflow (0.1-0.4 mL/min)

500-70MQD 30psi, Microflow (0.1-0.4 mL/min), Quick Disconnect

500-70P 50psi, 1mL/min

500-70Q 30psi, 1mL/min, Quartz

500-70QD 30psi, 1mL/min, Quick Disconnect

500-70QDAC 30psi, 1mL/min, Quick Disconnect, Argon Connect

500-70QP 50psi, 1mL/min, Quartz

500-70QQD 30psi, 1mL/min, Quartz Quick Disconnect

500-70QQDAC 30psi, 1mL/min, Quartz, Quick Disconnect, Argon Connect

500-71 30psi, 2mL/min

500-71P 50psi, 2mL/min

500-71Q 30psi, 2mL/min, Quartz

500-71QD 30psi, 2mL/min, Quick Disconnect

500-72 30psi, 3mL/min

500-72P 50psi, 3mL/min

500-72Q 30psi, 3mL/min, Quartz

500-72QD 30psi, 3mL/min, Quick Disconnect

500-72QQD 30psi, 3mL/min, Quartz, Quick Disconnect

### A-Type, 1.0 lpm, Ar

500-75 30psi, 1mL/min

500-75P 50psi, 1mL/min

500-75Q 30psi, 1mL/min, Quartz

500-76 30psi, 2mL/min

500-76P 50psi, 2mL/min

500-76Q 30psi, 2mL/min, Quartz

500-76QDAC 30psi, 2mL/min, Quick Disconnect, Argon Connect

500-77 30psi, 3mL/min

500-77P 50psi, 3mL/min

500-77Q 30psi, 3mL/min, Quartz

500-77QD 30psi, 3mL/min, Quick Disconnect

### K-Type, 0.7 lpm Ar

500-80 30psi, 3mL/min

500-80Q 30psi, 3mL/min, Quartz

500-80QD 30psi, 3mL/min, Quick Disconnect

500-80QDAC 30psi, 3mL/min, Quick Disconnect, Argon Connect

500-80QQD 30psi, 3mL/min, Quartz, Quick Disconnect

500-81 30psi, 1mL/min

500-81QD 30psi, 1mL/min, Quick Disconnect

500-81QDAC 30psi, 1mL/min, Quick Disconnect, Argon Connect

500-82 30psi, 2mL/min

500-82QD 30psi, 2mL/min, Quick Disconnect

500-82QDAC 30psi, 2mL/min, Quick Disconnect, Argon Connect

500-85 High Flow Concentric Nebulizer

500-85QD High Flow Concentric Nebulizer, Quick Disconnect

500-AC Argon Connect for Concentric Nebulizers Includes Insert and Body

500-QD Quick Disconnect for Nebulizer, Teflon with PFA Capillary Tubing

## Crossflow Nebulizers

500-92	Crossflow Nebulizer
500-92S	Crossflow Nebulizer, 34mm
500-93	Crossflow Nebulizer, High-Solids
500-94	High Flow Crossflow Nebulizer

## V- Groove Nebulizers

### Noordermeer V-Groove Nebulizers

510-10	Noordermeer V-Groove MDSN Nebulizer
510-10QD	Noordermeer V-Groove MDSN Nebulizer, Quick Disconnect
510-10Q	Noordermeer V-Groove MDSN Nebulizer, Quartz
510-10S	Noordermeer V-Groove MDSN Nebulizer, 1 lpm Ar

### Modified Lichte Nebulizers

510-20	Modified Lichte MDSN Nebulizer
510-20QD	Modified Lichte MDSN Nebulizer, Quick Disconnect
510-20Q	Modified Lichte MDSN Nebulizer, Quartz
510-20S	Modified Lichte MDSN Nebulizer, 1 lpm Ar

### Babington V-Groove

510-50	Babington MDSN, HF Resistant
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## Nebulizer Accessories

520-30	PTFE End Cap for use with 35mm Open End Spray Chambers
520-30S	PTFE End Cap for use with 34mm Open End Spray Chambers
520-40	PTFE End Cap, 35mm for use with Babington
520-40S	PTFE End Cap, 34mm for use with Babington
510-51	O-ring for Babington MDSN Nebulizer
520-31	O-ring for Concentric Nebulizer Inlet
520-32	O-ring, 35mm for 520-30 and 520-40
520-32S	O-ring, 34mm for 520-30S and 520-40S
520-36	O-ring, 35mm for 500-92, 2 per pack
520-36S	O-ring, 34mm for 500-92S, 2 per pack
520-35	Swagelok Fitting
520-37	Sample Tube, PTFE for Crossflow Nebulizer
520-38	Argon Inlet Fittings for Crossflow
510-52	Tubing and Collet for Babington MDSN Nebulizer
510-53	Argon Tube for Babington MDSN Nebulizer

## ICP & ICP-MS Consumables

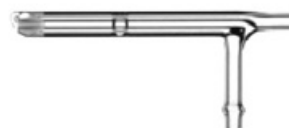
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500-92 - Crossflow Nebulizer



510-10 - Noordermeer V-Groove MDSN Nebulizer



510-20S - Modified Lichte MDSN Nebulizer, 1 lpm Ar



510-50 - Babington MDSN, HF Resistant



520-30 - PTFE End Cap for use with 35mm Open End Spray Chambers



**TMM 3500 - Teflon  
Mira Mist**



**PMM 4000 - PEEK  
Mira Mist**



**T2100**



**PMM CE - Mira  
Mist CE**



**AM 5000- Ari Mist**



**AM HP 5000- Ari  
Mist HP**

## Burgener ICP - ICP-MS Nebulizers

### *Mira Mist and Ari Mist Nebulizers for ICP & ICP-MS*

- TMM 3500** **Teflon Mira Mist**, Enhanced Parallel Path Teflon Nebulizer. Can operate on 0.2 ml/min to 2.5 ml/min. Excellent mist, and can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Operates on standard pressures of 35 - 45 psi. The Teflon Mira Mist can be used for any liquid. Salting is very rare, but can occur over long periods of time, especially with high Sodium levels in the solution. Such salting can be cleared easily with a dip in 5 - 10% HF, (Caution: Be careful when handling HF. It soaks into the skin before you feel it burning, and in low concentrations it looks like water.)
- PMM 4000** **PEEK Mira Mist**, Same as the Teflon Mira Mist, but easier to make than the Teflon Mira Mist, so you save a little. Works for most samples, but not concentrated acids, and not some organic solvents. Still has Teflon capillaries for the samples and for the gas. Standard pressure (45 psi), low sample flow, enhanced parallel path design. Can operate on 0.2 ml/min to 2.5 ml/min. Excellent mist, and can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers.
- T2100** Enhanced Parallel Path Teflon Nebulizer. Huge Sample Capillary: 750 microns / 1/32 inch. Designed as replacement for T2002 and BTN. Essentially unpluggable with un-dissolved particles. Can operate on 0.5 ml/min to 3.0 ml/min. Excellent mist, but not quite as good as Mira Mist, but better than most concentrics. Can handle very high level of particles in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Operates on standard pressures of 30 - 45 psi. The T 2100 can be used for any liquid. Salting is very rare, but can occur over long periods of time, especially with high Sodium levels in the solution. Such salting can be cleared easily with a dip in 5 - 10% HF
- PMM CE** **Mira Mist CE**, Designed for ICP-MS - CE interface. Medium pressure (80-90 psi), Very low sample flow (10 µl/min or less), enhanced parallel path design. Can operate on 0.01 ml/min to 2.5 ml/min. With Alcohol solutions can operate down to .001 ml/min. Excellent mist, can handle high level of particulates in sample. Fits regular chambers as a direct replacement for glass concentric nebulizers. Designed for CE / ICP / MS analysis. Allows CE capillary to extend to tip of nebulizer for zero suction, zero back pressure CE interfacing with ICP-MS. Works best with mini chamber.
- AM 5000** **Ari Mist**, Very low sample flow, enhanced parallel path design. Standard pressure (40 - 50 psi). Black PEEK body, Teflon sample and gas capillaries. Can operate on 0.050 ml/min to 1.0 ml/min. Good for ICP & ICP-MS. Only for samples that are particulate free. Fits regular chambers as a direct replacement for glass concentric nebulizers.
- AM HP 5500** **Ari Mist HP**, Ultra low sample flow, enhanced parallel path design. Higher Pressure (80 psi). Black PEEK body, Teflon sample and gas capillaries. Can operate on 0.005 ml/min to 1.0 ml/min. Good for LC/ICP-MS. Only for samples that are particulate free. Fits regular chambers as a direct replacement for glass concentric nebulizers. When run at 10 to 15 µl/min it provides similar results to direct injection nebulizers without the difficulties of direct injection.

# Glass Expansion NEW PRODUCTS

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## GLASS EXPANSION

Quality By Design

### Niagara II Plus

The new Niagara II Plus utilises flow injection technology to halve your analysis time.



### TruFlo Sample Monitor



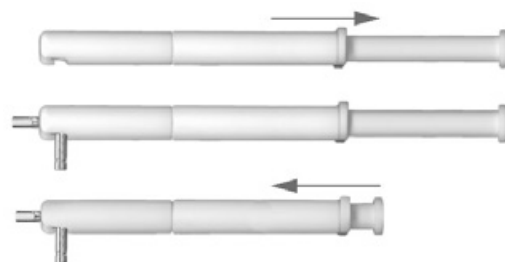
The new TruFlo Sample Monitor eliminates guesswork so you always know the actual rate of sample flow to your nebulizer.

### RF Coil

- High quality and consistent plating of our coils promotes extended coil life
- Each coil is supplied on a plastic former ensuring correct dimensions and easier installation
- Each coil is supplied in a special protective container to ensure correct dimensions are maintained, and the coil arrives corrosion free
- Correct alignment of the coil with respect to the torch body reduces devitrification of the outer tube
- Reusable alignment tools ensure correct installation every time. Our CD with Do-It-Yourself instructions saves time



### Eluo



Particle build-up in a nebulizer capillary and tip causes sample flow to be constricted, thereby reducing nebulizer efficiency and performance. Previously there was no simple way to effectively clean and unblock nebulizers. Now, blocked nebulizers can be safely and easily restored to optimum performance with a revolutionary new cleaning instrument - the Eluo.

The Eluo is designed to efficiently deliver a cleanser through the nebulizer capillary to dislodge particle build-up and thoroughly clean the nebulizer. One simple action does it all. No more messy procedures, waiting overnight or shattered nebulizers in ultrasonic baths.

### IsoMist Programmable Temperature Spray Chamber



With the new IsoMist Programmable Temperature Spray Chamber. The temperature is electronically controlled and any temperature between -10degC and +60degC can be selected.

**For more information, pricing, and part numbers visit our website at [www.precisionglassblowing.com](http://www.precisionglassblowing.com) or contact your account representative.**



## Nebulizers from Glass Expansion



**GLASS EXPANSION**  
Quality By Design

### GLASS EXPANSION ICP & ICP-MS Sample Introduction Systems

#### Glass Expansion Nebulizer Designations

##### ARxx-yy-ZZnnnE

AR	argon gas operated nebulizer
xx	the nominal argon pressure in psig (Note: 15psig~1bar) eg. 30=30psig~2bar
yy	the argon flow at nominal pressure, in L/min eg. 07=0.7L/min
ZZ	nebulizer model type: FC = Conikal nebulizer fitted with EzyFit FS = Slurry nebulizer fitted with EzyFit FSS = SeaSpray nebulizer fitted with EzyFit FM = MicroMist nebulizer fitted with EzyFit QV = Quartz VeeSpray v-groove nebulizer CV = Ceramic VeeSpray v-groove nebulizer CP = PolyCon Polyimide HF resistant nebulizer PFA = OpalMist PFA HF resistant nebulizer
nnn	aspirated uptake at nominal pressure, in ml/min eg. FC3 = 3ml/min, FM04 = 0.4ml/min, CP005 = 0.05ml/min
E	Letter "E" indicates that the nebulizer is supplied with the EzyLok argon connector



**Conikal concentric nebulizer,  
AR30-1-FC2E**



**SeaSpray concentric nebulizer,  
AR35-07-FSS2E**

#### Conikal

The Conikal concentric nebulizer gives reproducible results for standard ICP analyses. It represents the choice nebulizer for high precision, routine aqueous and organic applications.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 5%
- High tolerance to particulates, typically up to 75µm
- Low RSD's due to highly accurate construction
- Standard available uptake: 1, 2 & 3ml/min

#### SeaSpray

The SeaSpray concentric nebulizer offers outstanding nebulization efficiency for trace level analyses. It offers freedom from clogging while nebulizing solutions to the limit of solubility of most mineral salts, and conferring significant sensitivity gains.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 20%
- High tolerance to particulates, typically up to 75µm
- Low RSD's due to highly accurate construction
- Standard available uptake: 2ml/min. 1ml/min uptake available on request

# Nebulizers from Glass Expansion



## MicroMist

The MicroMist micro-uptake glass concentric nebulizer offers high performance for limited sample volumes. It makes routine ICP-MS Hg determinations possible and reduces matrix effects when used with Glass Expansion's Cinnabar spray chamber.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 15%
- Low RSD's due to highly accurate construction
- Standard available uptake: 0.05, 0.1, 0.2, 0.4 & 0.6ml/min

## PolyCon

The PolyCon concentric nebulizer represents the choice nebulizer for high precision analyses involving samples digested in HF. The PolyCon has been used successfully in ICP desolvators such as the MCN-6000, where high temperatures are encountered. It has become a favorite in the semi conductor industry, and has enabled analysts to produce accurate ( $r = 0.9998$ ) calibration curves for low-ppt levels of Na, K, Fe and Ca in 30% hydrogen peroxide.

- Material: HF Resistant Polyimide
- High physical reproducibility ~ 2%
- High tolerance to particulates, up to 75 $\mu$ m depending on uptake
- TDS tolerance, typically ~5%
- Low RSD's due to concentric geometry
- Uses only standard ICP argon supply pressures
- Standard 6mm size fits standard cyclonic spray chambers. Adaptors are available for Scott type spray chambers
- Standard available uptakes: 0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 2 & 5ml/min for samples with large particulates

## OpalMist

The OpalMist PFA concentric nebulizer represents the choice nebulizer for high precision analyses involving analyses requiring high chemical resistancy to HF, alkalis and organics. It also provides excellent results for trace analyses.

- Material: PFA
- High physical reproducibility ~ 3%
- Strong and consistent self-aspiration
- High tolerance to particulates, up to 75 $\mu$ m depending on uptake
- TDS tolerance, typically up to 30%
- Low RSD's due to concentric geometry
- Uses only standard ICP argon supply pressures
- Standard 6mm size fits standard cyclonic spray chambers. Adaptors are available for Scott type spray chambers
- Standard available uptakes: 0.05, 0.1, 0.2, 0.4, 0.6 & 2ml/min

## ICP & ICP-MS Consumables

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**MicroMist micro-uptake glass concentric nebulizer, AR30-1-FM04E**



**PolyCon concentric nebulizer, AR35-07-CP2E**



**OpalMist PFA concentric nebulizer, AR30-1-PFA005**