



**GLASS EXPANSION**

Quality By Design

# ICP-OES/ICP-MS Supplies & Accessories Catalogue

Issue 10



## Nebulizers

|                                                        |   |
|--------------------------------------------------------|---|
| Introduction to Glass Expansion Nebulizers .....       | 1 |
| Nebulizer Types .....                                  | 1 |
| Glass Expansion Nebulizer Part Numbers Explained ..... | 1 |
| Learn about Glass Expansion Nebulizers .....           | 2 |
| Nebulizer Selection Guide .....                        | 3 |

## Spray Chambers

|                                                                              |   |
|------------------------------------------------------------------------------|---|
| Introduction to Glass Expansion Spray Chamber .....                          | 4 |
| Spray Chamber Types .....                                                    | 4 |
| Helix CT - Interface Between Nebulizer and Spray Chamber .....               | 4 |
| HydraMist Simultaneous Cold Vapor/Pneumatic Nebulization Spray Chamber ..... | 5 |
| Spray Chamber Selection Guide .....                                          | 6 |

## Torches

|                                 |   |
|---------------------------------|---|
| RF Coils and ICP-MS Cones ..... | 8 |
|---------------------------------|---|

## Accessories

|                                                                          |    |
|--------------------------------------------------------------------------|----|
| IsoMist XR Programmable Temperature Spray Chambers .....                 | 9  |
| Guardian In-Line Particle Filter .....                                   | 10 |
| Guardian In-Line Non-Return Gas Filter .....                             | 10 |
| Eluo Nebulizer Cleaning Tool .....                                       | 11 |
| Trident In-Line Reagent Additions Kits .....                             | 11 |
| Elegra Argon Humidifier .....                                            | 11 |
| High Sensitivity Single-Cell Sample Introduction System for ICP-MS ..... | 12 |
| WindTunnel Autosampler Enclosure .....                                   | 12 |
| Laser Ablation .....                                                     | 13 |
| Autosampler Probes .....                                                 | 13 |

## Agilent Technologies

|                             |         |    |
|-----------------------------|---------|----|
| 7700/8800 .....             | ICP-MS  | 14 |
| 7800 .....                  | ICP-MS  | 16 |
| 7900 .....                  | ICP-MS  | 18 |
| 8900 .....                  | ICP-MS  | 20 |
| Agilent ICP-MS Cones .....  |         | 22 |
| 5100/5110 SVDV/VDV/RV ..... | ICP-OES | 23 |
| 700-ES Axial .....          | ICP-OES | 25 |
| 700-ES Radial .....         | ICP-OES | 28 |

## PerkinElmer

|                                |         |    |
|--------------------------------|---------|----|
| NexION 300/350 .....           | ICP-MS  | 31 |
| NexION 1000/2000 .....         | ICP-MS  | 34 |
| Avio 200/500 .....             | ICP-OES | 36 |
| Optima 4000/5000/7000 DV ..... | ICP-OES | 38 |
| Optima 4000/5000/7000 V .....  | ICP-OES | 40 |
| Optima 8000/8300 DV .....      | ICP-OES | 42 |

## Shimadzu

|                               |           |    |
|-------------------------------|-----------|----|
| 2030 .....                    | ICP-MS    | 44 |
| 7500/8100 and 9000/9800 ..... | ICPS/ICPE | 46 |

## Spectro

|                                    |         |    |
|------------------------------------|---------|----|
| Arcos II EOP and Blue EOP/TI ..... | ICP-OES | 48 |
| Arcos II SOP and Blue SOP .....    | ICP-OES | 50 |

## Thermo Fisher

|                   |         |    |
|-------------------|---------|----|
| iCAP Duo .....    | ICP-OES | 52 |
| iCAP Radial ..... | ICP-OES | 54 |

## Fittings and Connectors

|                                                     |    |
|-----------------------------------------------------|----|
| Nebulizer Fittings and Connectors .....             | 56 |
| Spray Chamber/Torches Fittings and Connectors ..... | 57 |

## Pump Tubing

|                                                  |    |
|--------------------------------------------------|----|
| Standard Peristaltic Pump Tubing .....           | 58 |
| Contour Flared End Peristaltic Pump Tubing ..... | 61 |

Introduction to Glass Expansion Nebulizers

The nebulizer is a critical component of your ICP sample introduction system, so why not opt for the highest quality? Glass Expansion has been manufacturing ICP nebulizers since the early 1980s and continually updates nebulizer designs to improve performance and ease of use. Our proprietary designs include a thick walled VitriCone capillary, UniFit sample line connector and the newly released Direct Connect (DC) product line.

Whether your ICP laboratory is analyzing clean aqueous samples, samples containing HF and/or high dissolved salts, or volatile organic solvents; Glass Expansion has a nebulizer to suit your needs. Learn about the performance advantages and overall difference in construction quality that a Glass Expansion nebulizer can provide your ICP laboratory.

Nebulizer Types

| Nebulizer |                                                                                     | TDS (%) | Particulates (µm) | HF  | Precision | Purity    | Material |
|-----------|-------------------------------------------------------------------------------------|---------|-------------------|-----|-----------|-----------|----------|
| SeaSpray  |    | 20      | 75                | No  | High      | Good      | Glass    |
| MicroMist |                                                                                     | 15      | 40*               | No  | High      | Good      | Glass    |
| Conikal   |                                                                                     | 5       | 75                | No  | High      | Good      | Glass    |
| Slurry    |                                                                                     | 1       | 150               | No  | High      | Good      | Glass    |
| OpalMist  |    | 15      | 75*               | Yes | High      | Excellent | PFA      |
| DuraMist  |   | 30      | 75*               | Yes | High      | Good      | PEEK     |
| VeeSpray  |  | 30      | 300               | Yes | Moderate  | Good      | Ceramic  |

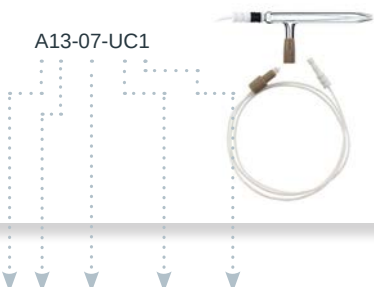
\* Varies with nebulizer uptake

Glass Expansion Nebulizer Part Numbers Explained

Glass DC Nebulizers

Conikal  
1mL/min uptake

A13-07-UC1



A#-yy-ZZnnn

- A

Gas pressure rating of 40 psi
- #

Gasline fitting type eg:  
13 = Suitable for Agilent 5100/5110
- yy

The argon flow in L/min eg. 07=0.7L/min
- ZZ

Nebulizer model type:  
UC = Conikal U-Series nebulizer  
US = Slurry U-Series nebulizer  
USS = Seaspray U-Series nebulizer  
UM = MicroMist U-Series nebulizer  
CV = Ceramic VeeSpray v-groove nebulizer  
DM = DuraMist HF resistant nebulizer  
PFA = OpalMist PFA HF resistant nebulizer
- nnn

Aspirated uptake at nominal argon flow, in mL/min eg:  
UC1 = 1mL/min  
UM04 = 0.4mL/min  
PFA005 = 0.05mL/min

## Learn About Glass Expansion Nebulizers

All Glass Expansion concentric nebulizers use the unique VitriCone™ construction delivering the best possible precision.

### DC Nebulizer



The DC (Direct Connection) nebulizer has a UniFit sample connector which slides easily over the sample arm and an argon connector configured to connect directly to your ICP.

#### DC Nebulizer Benefits:

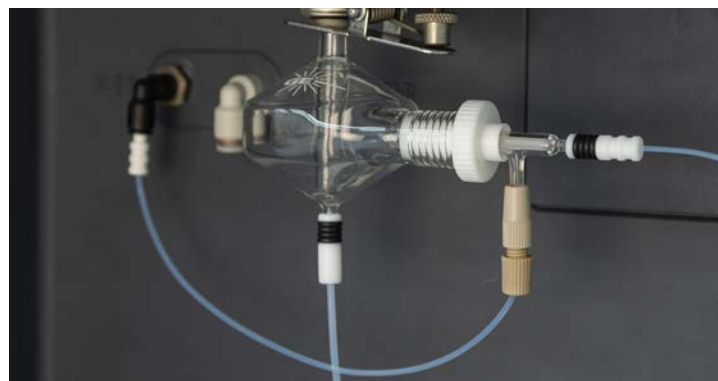
- Inert metal-free argon connector.
- Instrument-specific Direct Connect flexible argon line.
- Reliable ratchet fitting ensures leak-free gas connection.

DC versions of the SeaSpray, MicroMist, Conikal, Slurry, DuraMist, OpalMist and VeeSpray nebulizers are available to suit the most common models of ICP-OES and ICP-MS.

The DC nebulizer part number has a prefix specific to each type of gas connector. For example, the prefix "A13-" denotes a connector for the Agilent 5100/5110 ICP-OES, so part number A13-07-USS2 is a SeaSpray nebulizer configured for direct connection to the Agilent 5100.

#### In addition to these unique benefits, the DC nebulizer shares the following benefits with the U-Series nebulizer:

- Resists blockage: The sample channel is uniform from the entry point to the tip, so there is nowhere for particulates to be trapped.
- Fast washout: Since there is nowhere for sample to be trapped, the fastest possible washout and highest sample throughput is achieved.
- Simple to use: Our proprietary UniFit connector slides easily over the sample arm and creates an excellent seal.
- Full length VitriCone construction: With the VitriCone design, the sample channel is constructed from heavy glass capillary which is machined to very high tolerances.



### DC Nebulizer Gas Fitting Connectors

|                                    |             |
|------------------------------------|-------------|
| Agilent Vista/700-ES               | 70-803-0969 |
| Agilent MP-AES                     | 70-803-0969 |
| Agilent 4500/7500                  | 70-803-1086 |
| Agilent 7700/7800/7900/8800/8900   | 70-803-1105 |
| Agilent 5100/5110                  | 70-803-1105 |
| Horiba Jobin Yvon (All models)     | 70-803-0911 |
| Leeman (All models)                | 70-803-0969 |
| PerkinElmer Optima                 | 70-803-1070 |
| PerkinElmer Elan/NexION 300/350    | 70-803-1049 |
| PerkinElmer NexION 1000/2000       | 70-803-1449 |
| Shimadzu 9000/9800                 | 70-803-1311 |
| Shimadzu 2030                      | 70-803-1311 |
| Spectro (All models)               | 70-803-1070 |
| Thermo iCAP 6000/7000/Q & X-Series | 70-803-1292 |
| Thermo Neptune                     | 70-803-1468 |
| Analytik Jena ICP-MS               | 70-803-0969 |

## U-Series Glass Concentric Nebulizers

SeaSpray, MicroMist, Conikal and Slurry U-Series nebulizers are available to suit all common models of ICP-OES and ICP-MS. Each U-Series nebulizer is supplied with a UniFit sample connector.

U-Series nebulizers can be identified by the letter 'U' in the part number, eg. ARG-07-USS2 or ARG-1-UM04.

All glass concentric nebulizers in this catalog are U-Series nebulizers.

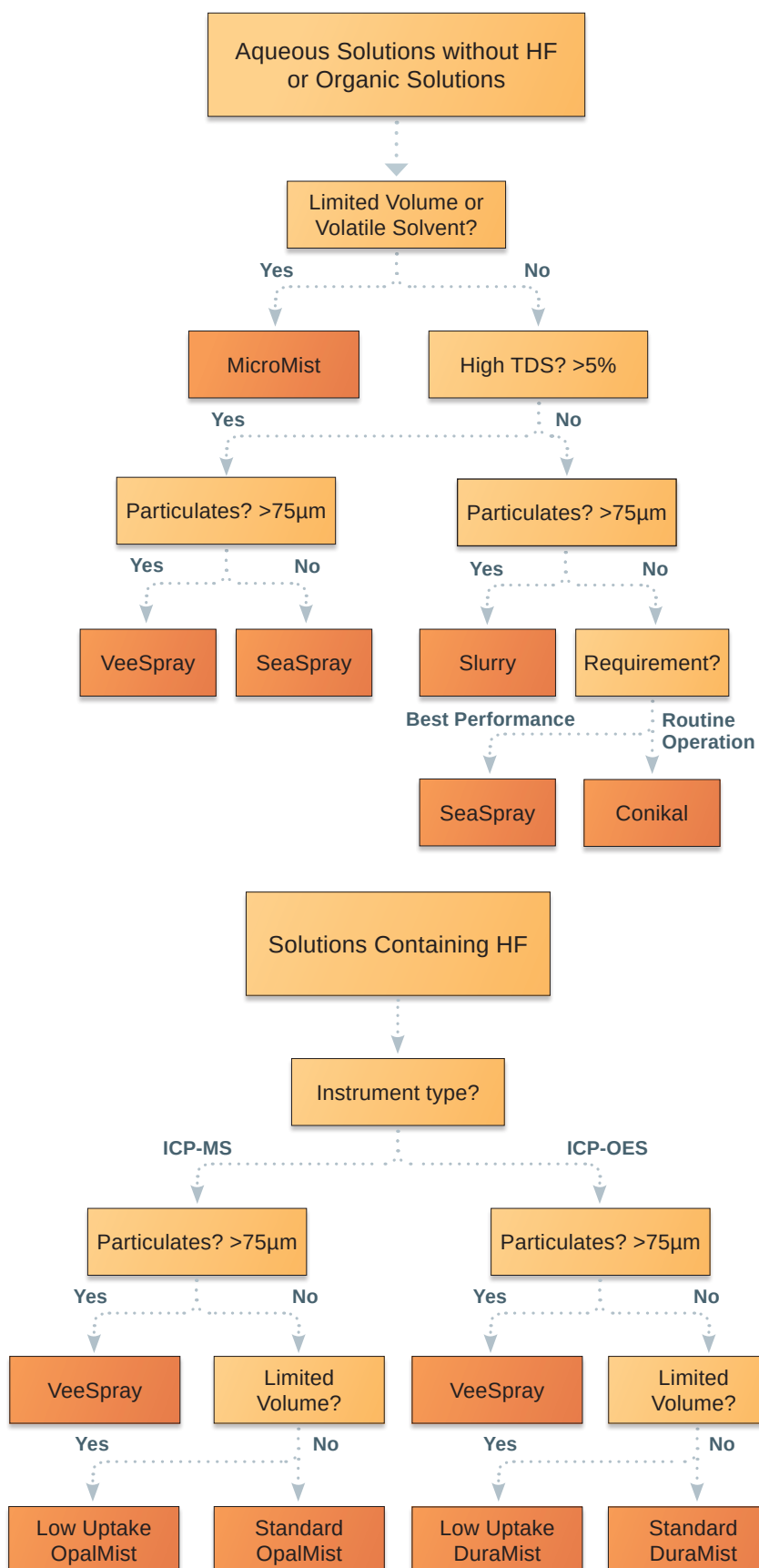
### Nebulizer with EzyFit connector



The EzyFit is a sample connector which slides into the nebulizer sample arm. It provides lower dead volume and faster washout times than earlier designs but is not quite as effective as the newer U-Series.

The SeaSpray, MicroMist, Conikal and Slurry nebulizers are available with EzyFit connection. They can be identified by the letter "F" in the part number, eg. AR30-07-FSS2E or AR30-1-FM04E

## Nebulizer Selection Guide



## Introduction to Glass Expansion Spray Chambers

The spray chamber is a crucial component of the ICP sample introduction system since it has a profound effect on transport efficiency, precision, and washout. Glass Expansion revolutionized the spray chamber design for the ICP industry with the Tracey and Twister cyclonic spray chamber, providing improved efficiency and reduced washout. Glass Expansion's unique Helix CT nebulizer interface, provides a zero dead volume seal that results in higher throughput compared to non-Glass Expansion designs.

### Spray Chamber Types

|              |                                                                                     |                                                                                                                                |
|--------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Tracey       |    | Internal Volume, mL: 50<br>Internal Baffle: No<br>HF-resistant: No<br>Precision: Very Good<br>Purity: Good<br>Material: Glass  |
| Twister      |    | Internal Volume, mL: 50<br>Internal Baffle: Yes<br>HF-resistant: No<br>Precision: Excellent<br>Purity: Good<br>Material: Glass |
| Cinnabar     |   | Internal Volume, mL: 20<br>Internal Baffle: No<br>HF-resistant: No<br>Precision: Very Good<br>Purity: Good<br>Material: Glass  |
| Twinnabar    |  | Internal Volume, mL: 20<br>Internal Baffle: Yes<br>HF-resistant: No<br>Precision: Very Good<br>Purity: Good<br>Material: Glass |
| Tracey TFE   |   | Internal Volume, mL: 50<br>Internal Baffle: No<br>HF-resistant: Yes<br>Precision: Good<br>Purity: Good<br>Material: PTFE       |
| Twister TFE  |   | Internal Volume, mL: 50<br>Internal Baffle: Yes<br>HF-resistant: Yes<br>Precision: Very Good<br>Purity: Good<br>Material: PTFE |
| Tracey PFA44 |  | Internal Volume, mL: 44<br>Internal Baffle: No<br>HF-resistant: Yes<br>Precision: Good<br>Purity: Excellent<br>Material: PFA   |

## Helix CT - The Modern Interface Between Nebulizer and Spray Chamber



Traditionally, ICP-OES and ICP-MS sample introduction systems have relied on o-rings to form a gas-tight seal between the nebulizer and spray chamber. There are several drawbacks with an o-ring seal, such as:

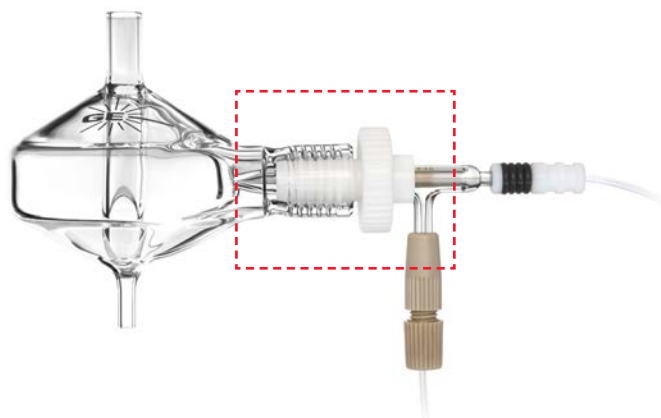
- Potential for contamination due to dead volume around the o-ring seal
- Chemical resistivity of strong acids and organic solvents
- The o-rings are difficult to replace, often requiring tools
- Bonding to the nebulizer can result in breakage

Glass Expansion is now pleased to introduce the new Helix CT spray chamber with ConstantTorque technology, which provides a constant, reproducible, inert, gas-tight seal between the nebulizer and spray chamber.

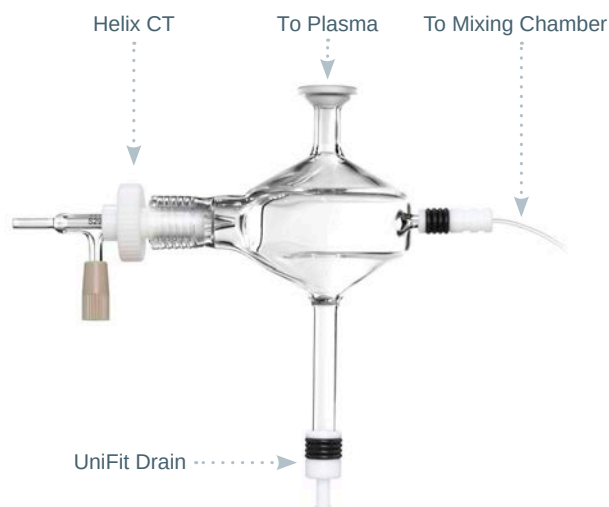
The main feature of the Helix CT spray chamber is a new Helix locking screw with built-in torque control mechanism that allows for a consistent seal of the PTFE ferrule against the nebulizer –making it impossible to overtighten or undertighten while ensuring a gas-tight seal each and every time.

A new PressFit PTFE ferrule provides a chemically inert seal around the nebulizer, which is immune to strong acids and organic solvents routinely used in ICP sample preparation.

The new Helix CT cyclonic spray chamber by Glass Expansion, therefore, eliminates all the drawbacks of the o-ring nebulizer seal, while improving user safety by preventing broken nebulizers.



## HydraMist Simultaneous Cold Vapor/ Pneumatic Nebulization Spray Chamber



The Glass Expansion HydraMist is a sensitive, simple-to-use spray chamber for Inductively Coupled Plasma (ICP) that allows simultaneous operation of both conventional pneumatic nebulization and cold-vapor/hydride generation. Cold vapor generation can provide more than 10-fold improvement in sensitivity on ICP for cold vapor forming elements such as As, Sb, Se, Tl and Hg. The generation of volatile species of these elements results in increased analyte loading of the analytical plasma giving lower detection limits.

The design of the HydraMist spray chamber is based upon Glass Expansion's industry-standard cyclonic spray chamber, giving excellent sensitivity and short-term analytical precision with fast washout. The HydraMist spray chamber features a secondary inlet port that mixes the aerosolized sample and liquid reductant inside the spray chamber for rapid conversion of the As, Sb, Se, Tl and Hg analytes into volatile hydride species. The unique drain design ensures fast, complete removal of waste from the spray chamber, eliminating excess hydrogen build-up that causes sample reflux degrading analytical precision.

The HydraMist Spray Chamber Features:

- The same outstanding short-term analytical precision and washout as other Glass Expansion cyclonic spray chambers
- Fast and complete vapor phase formation of volatile As, Se, Sb, Tl and Hg species for the best detection limits in hydride generation mode
- A unique drain design to eliminate hydrogen build-up and sample reflux that degrades short-term precision
- Economic, just replace your current spray chamber and keep your existing nebulizer
- Improve productivity by analysing non-hydride forming elements and cold vapor elements simultaneously, avoiding system shutdowns to change over between the hydride generator accessory and conventional pneumatic nebulization

### Hydride Kit

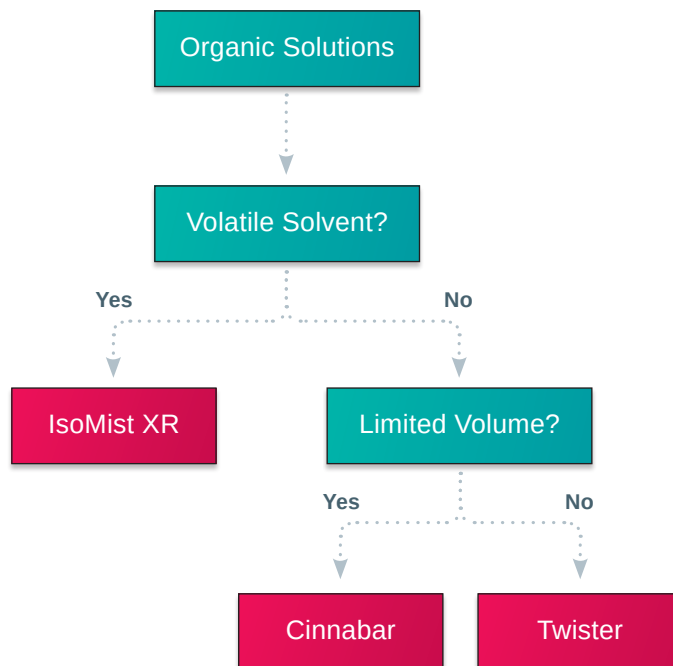
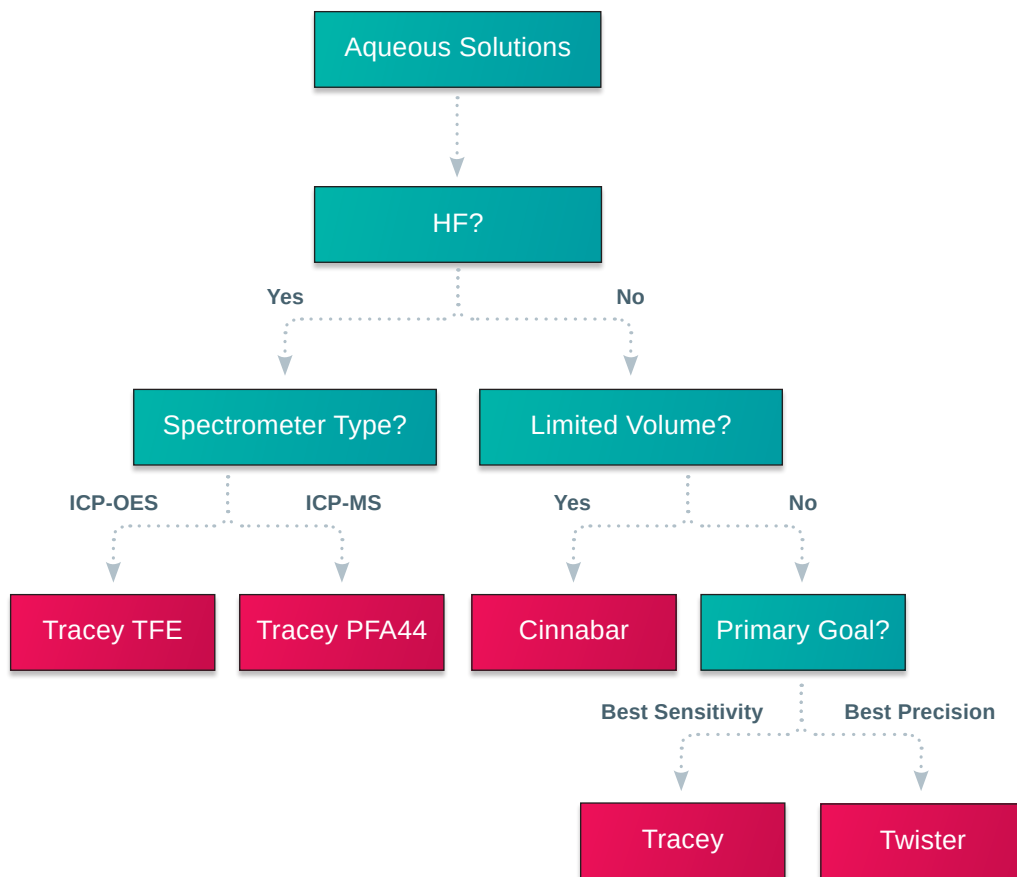
For Agilent 5100/5110

KT-1157

For Thermo iCAP 7000 Duo

KT-1156

## Spray Chamber Selection Guide



## D-Torch (Demountable Torch)

The D-Torch is a revolutionary new demountable torch design. It provides the benefits of a fully demountable torch at a significantly lower cost. Interchangeable outer tubes made of quartz or ceramic are available. The quartz tube is ideal for most aqueous applications and, since the outer tube is usually the first to wear, you can make a significant saving by replacing just the outer tube rather than the whole torch.

The ceramic outer tube is of particular benefit for the analysis of samples with high salt content or wear metals in engine oils, where quartz outer tubes often suffer from short lifetime. The ceramic outer tube has a much longer lifetime, greatly reducing interruptions and downtime due to torch failure. The D-Torch uses the same mounting system as the standard fixed torch so there is no additional cost or complexity to install it.

- Demountable outer tube – why replace the entire torch when just the outer tube wears?
- Interchangeable quartz and ceramic outer tubes.
- Much lower cost than other demountable torches.
- Interchangeable injectors for aqueous, organics, high dissolved solids or HF applications.

\* The D-Torch is covered by US Patent 8,232,500 B2

Our new D-Torch models suited for the Agilent 5100/5110, PerkinElmer Avio 200/500 and Spectro Arcos II and Blue incorporates the same easy to use, self-aligning and locking features of the standard torch in a robust cost effective design.

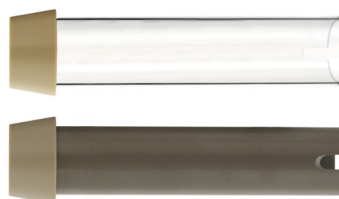
### Complete D-Torch



### Injectors



### Outer Tubes



### Torch Body



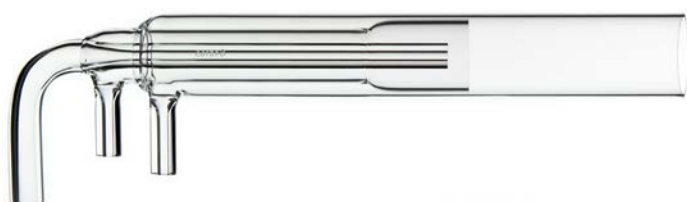
## Semi Demountable Torch



- Highly accurate construction
- Lower running cost than one-piece torches

Usually comprises a quartz torch body, a torch adaptor, an injector and GazFit connectors. All these parts are replaceable, making the semi demountable torch more cost effective than the fixed quartz torch. The design of the torch for standard analyses and HF analyses is the same, with only the injector material changing. For aqueous and organics analyses use a quartz injector, while for HF analyses use an alumina injector. Hence simply interchange between quartz and alumina injectors for appropriate analyses. Several internal diameters for both quartz and alumina injectors are also available.

## Fixed Quartz Torches (One Piece)



- Precise quartz construction
- Wide range held in stock
- Simple to use
- Lowest initial cost

## RF Coils – more efficient energy transfer



### Why Change your RF Coil?

- Regular replacement of corroded coils reduces the load on the RF generating system.
- Changing corroded coils increases energy transfer, resulting in a more robust plasma and generally higher analytical line intensities.

### Advantages of Glass Expansion RF Coils

- 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 RF Coil with respect to the torch body reduces devitrification of the outer tube.
- Reusable alignment tools ensure correct installation every time. Our Do-it-yourself instructions saves time.

### Glass Expansion installation Kits for RF Coils

- Incorrect alignment of the torch in the coil will dramatically reduce torch life. The Glass Expansion Installation Kits help ensure correct alignment and maximum torch life.
- Correct alignment of the RF Coil with respect to the torch body reduces devitrification of the outer tube.
- Re-usable alignment tools are available separately to ensure correct installation of the coil every time.
- Our easy to follow Do-It-Yourself installation instructions save you time, and the cost of a service call.

#### All kits contain:

- An Installation Kit – Aligns coil to torch mounting bracket.
- Required Spanner/s – Designed specifically for each instrument.
- USB - Do-It-Yourself instructions.



## ICP-MS Cones



Our ICP-MS interface cones are made from ultra-pure metals sourced from specialty smelters. Our highly experienced machinists use state of the art CNC machines and electron beam welding to provide cones of the with the finest tolerances for the highest quality.

We supply cones for all of the popular ICP-MS models and, to make sure you get all the support you need, we have a staff of technical experts and a fully equipped ICP-MS laboratory for testing and evaluation.

### No-risk guarantee:

As with all of our products, our cones are backed by our complete satisfaction guarantee.

### Free refurbishment:

Extend the life of your platinum cones with our free refurbishment program. In many cases, a platinum cone can be refurbished multiple times and its lifetime greatly extended. As a customer service, Glass Expansion will refurbish your platinum cones free-of-charge.

### Platinum reclaim:

If your platinum cone cannot be refurbished, we will provide a rebate for the value of platinum in the cone.

### Coneguard

The ConeGuard Thread Protector protects the cone thread from corrosive cleaning solutions and greatly extends cone life.

## IsoMist XR Programmable Temperature Spray Chamber



The IsoMist XR programmable temperature controlled cyclonic spray chamber now features an improved thermodynamic design providing an extended temperature range and faster cool-down, so your ICP is ready to go sooner.

IsoMist XR is a compact, convenient and maintenance-free temperature controlled sample introduction system for all ICP's.

### Improved Analytical Stability with Precise Temperature Control

On the IsoMist XR, the spray chamber temperature is accurately controlled through an improved thermodynamic design using a multi-stage peltier device. The spray chamber temperature is settable in 1°C increments from -25°C to 80°C guaranteeing optimum conditions can be used for any application.

### Reduce Oxide Interferences in ICP-MS

Using the IsoMist XR spray chamber at sub-ambient temperatures on an ICP-MS, the sample is cooled, less water vapor is transferred to the plasma resulting in lower oxide formation and reduced polyatomic (ArO, ArOH) interferences. Less oxides in the plasma mean fewer interferences, improving accuracy and detection limits.

### Perfect for Naphtha and Gasoline Analysis

For volatile solvents, a lower sample introduction temperature reduces nebulization efficiency avoiding quenching of the plasma from solvent over-loading. With a minimum operating temperature of -25°C, analyzing volatile organic solvents such as naphtha and gasoline by ICP is even easier.

### Improve Analytical Stability with Constant Spray Chamber Temperature

Fluctuations in the lab temperature affects sample viscosity and nebulization efficiency. Maintaining the sample introduction system at a constant and stable temperature improves analytical reproducibility, enhances throughput and lowers operating costs by reducing the need to re-run samples when a check standard drifts outside the acceptable upper or lower limits.

### Elevated Sample Introduction Temperatures Enhances Sensitivity

The sensitivity for many analyses can be enhanced by operating the spray chamber at elevated temperatures - especially important for limited sample volumes. Heating the spray chamber also helps with the analysis of viscous samples such as lubricants and edible oils.

### A Spray Chamber Optimized for Analytical Performance

The IsoMist XR incorporates a proven cyclonic spray chamber design in glass, quartz and HF resistant PFA with Helix CT interface. Compared to a Scott type spray chamber, cyclonic spray chambers are more sensitive and have better washout. The IsoMist XR includes the Helix CT nebulizer interface, which eliminates sample contamination and ensures easy nebulizer removal for routine nebulizer cleaning. The Helix CT nebulizer interface also has zero dead volume, reducing carry-over and improving washout between samples. With a positive stop built-in, Helix CT ensures correct and reproducible nebulizer insertion depth for constant nebulizer performance.



### Easy to Use Software

For maximum convenience, the IsoMist XR can be controlled from a PC via USB or Bluetooth wireless interface. The spray chamber temperature can be monitored during an analytical run with time vs temperature plot on your PC screen.

### Elegant, Ergonomic and Compact

The IsoMist XR is an elegant, compact, stand-alone system manufactured from materials resistant to attack from acids and solvents commonly used in ICP analysis. By using a peltier to maintain the spray chamber temperature, the messy, noisy and high-maintenance refrigerated circulating baths used with jacketed spray chambers has been eliminated. The compact design means all IsoMist XR Programmable Temperature Controlled Spray Chambers are compatible with virtually any ICP-OES or ICP-MS.

## Guardian In-Line Sample Filter

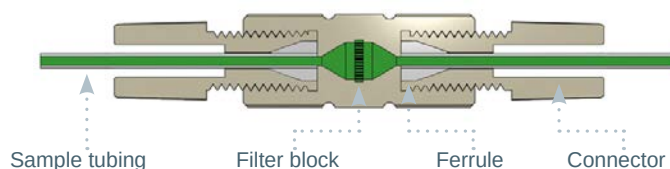


If there are particulates in your samples, there is a risk that they may get trapped in the narrow bore sample tubing or within the nebulizer. The Guardian In-Line Sample Filter provides a simple and effective way to eliminate this risk. This filter is easily inserted in the sample tubing between the autosampler probe and the nebulizer. It incorporates a 120 micron PolyComb filter and is suitable for use with 1/16 inch (1.6mm) OD or 1.3mm OD sample tubing.

The purpose-built clog-resistant design is ideal for ICP samples. Unlike sintered or frit style filters, the linear honeycomb structure makes the PolyComb filter resistant to clogging from particulates. Any particle build-up is easily removed by back-flushing using the Eluo Adaptor 70-803-1160. And the PEEK material is suitable for use with all of the most common ICP solutions.



Eluo Adapter For In-Line Filter



### Guardian In-Line Sample Filter

|                                 |             |
|---------------------------------|-------------|
| In-Line Filter                  | 70-803-1108 |
| Eluo Adaptor for In-Line Filter | 70-803-1160 |
| Fitting Seal 1/16 (PKT 10)      | 70-803-0749 |

## Guardian In-Line Non-Return Gas Filter



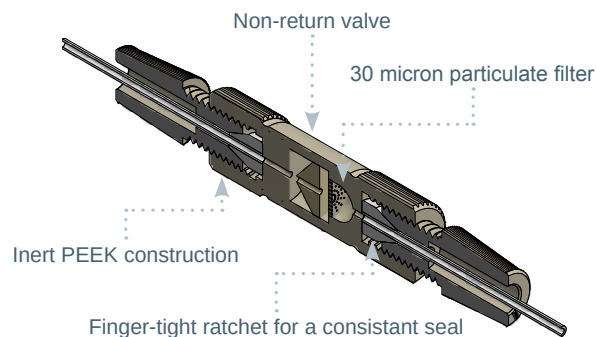
The new Guardian In-line Non-Return Gas Filter provides protection for your ICP system in two ways:

1. A non-return valve prevents acidified sample or rinse solution syphoning into the instrument gas box.
2. 30-micron PolyComb filter protects the nebulizer from particulates in the instrument gas supply.

The Guardian In-line Non-Return Gas Filter is positioned between the Argon inlet on the Direct Connection nebulizer and the gas supply fitting on the instrument. The In-line Non-Return Filter has a one-way valve that allows argon to flow from the instrument into the nebulizer, but prevents liquid syphoning into the instrument. A unique PolyComb 30-micron filter design protects the nebulizer from particulates from the gas supply or from worn or damaged fittings in the gas lines. Unlike Sintered or Frit style filters, the linear honeycomb structure makes PolyComb most resistant to particulate and dissolved solid clogging.

Syphoning of the sample or rinse solution into the nebulizer argon control module on your ICP can occur at the end of an analytical run when the nebulizer gas pressure is turned off and there is liquid in the sample flow path. It is made worse if the autosampler probe stays in the rinse position at the end of a run.

A real problem using an autosampler for unattended overnight runs, it is a silent, invisible killer of your ICP. Acidified solution in the instrument Argon control module can cause corrosion to electronic sensors in mass flow controllers and damage regulators that can result in expensive repairs to your ICP and un-planned down time.



### Guardian In-Line Non-Return Gas Filter

|                                        |             |
|----------------------------------------|-------------|
| Guardian In-Line Non-Return Gas Filter | 70-803-1362 |
|----------------------------------------|-------------|

## Eluo Nebulizer Cleaning Tool



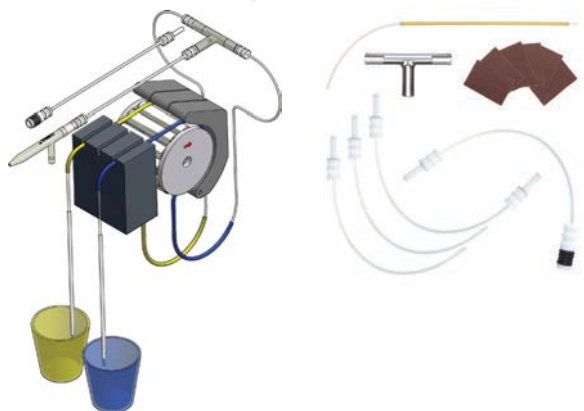
Particle build-up in a nebulizer capillary and tip causes sample flow to be constricted, reducing nebulizer efficiency and performance. Now, blocked nebulizers can be safely and easily restored to optimum performance with a revolutionary cleaning instrument – the Eluo.

The Eluo is designed to efficiently deliver a cleanser through the nebulizer capillary to dislodge particle build-up and thoroughly clean the nebulizer

### Eluo Nebulizer Cleaning Tool

|                                      |             |
|--------------------------------------|-------------|
| Eluo for Glass concentric Nebulizers | 70-ELUO     |
| Eluo HF Nebulizer Cleaner            | 70-ELUO-OPD |
| Fluka RBS-25 concentrate             | FLUKA25     |
| O-ring Kit for Eluo (2 sets)         | 70-0806     |

## Trident In-Line Reagent Additions Kits



Internal standards are often used to improve stability. The internal standardization process involves the addition of a known concentration of a particular element to every sample. This can be a very time-consuming procedure. The Glass Expansion Trident Kits allow the internal standard to be automatically mixed with each sample during sample introduction, thus saving considerable sample preparation time.

Check the Trident Dilution Factor Calculator on our website to find out the sample and internal standard dilution factors for selected combinations of pump tubing.

The peristaltic pump tubing is not supplied as part of the Internal Standard Kit but can be ordered separately.

### Trident Internal Standard Kit

|                                      |             |
|--------------------------------------|-------------|
| Trident Internal Standard Kit        | 60-808-1185 |
| Trident Internal Standard Kit for HF | 60-808-1150 |

## Elegra Argon Humidifier



Elegra

Elegra Dual

An Argon Humidifier is commonly used in ICP analyses involving samples with high concentrations of dissolved solids. It helps to alleviate salt deposits in the nebulizer and torch injector, allowing uninterrupted and maintenance-free operation.

- Compact, cost-effective design.
- No heating or electric power required.
- Non-pressurized water reservoir.
- An easy-to-use bypass switch allows you to take the Elegra off-line without disconnecting argon lines. (Not available with Elegra Dual)
- Highly efficient membrane humidification technology.
- Improved signal stability for samples with high TDS.
- Simple to install, use and maintain.
- Improves productivity by reducing down-time for cleaning.
- Inert metal-free construction eliminates contamination.
- Maximum and minimum fill marks ensure that you are always operating under optimum conditions.
- Compatible with all ICP-OES and ICP-MS models. Direct connection to argon outlet provided for most models.
- Elegra Dual two-channel configuration available for ICP-MS instruments using auxiliary argon.

### Elegra Argon Humidifier

O-ring for Capricorn or Elegra Cap (PKT 3)

70-V-225

High Sensitivity Single-Cell Sample Introduction System for ICP-MS



Single-cell analysis using an Inductively Coupled Plasma-Mass Spectrometer (SC-ICP-MS) is enhancing the fundamental understanding in cellular biology, oncology and drug discovery. SC-ICP-MS provides for the quantification of metals in individual biological cells and is used as a research tool to allow scientists to study disease aetiology, better understand diseased cell states and develop new drug treatments to give better patient outcomes.

In single-cell analysis, the sample introduction system converts a continuous stream of biological cells efficiently into an aerosol of individual cells and transfers the aerosol into the Inductively Coupled Plasma of the ICP-MS for analysis. A critical aspect of the sample introduction system is the cells must remain intact and unruptured during the nebulization process to ensure each individual cell produces a single ion burst inside the plasma that can be transferred into the mass analyser of the ICP-MS for quantification.

Conventional ICP-MS spray chambers have low transport efficiencies (typically < 5% TE) that filter out larger droplets (> 5µm) from the nebulizer aerosol. As most cell lines of interest are larger than 5µm, the secondary filtering mechanism of conventional spray chamber designs rejects a high proportion of the cells from passing to the plasma. To overcome this significant deficiency the Glass Expansion spray chamber design for single cell analysis is different from conventional ICP-MS spray chambers.

Glass Expansion have developed a high sensitivity Single-Cell Sample Introduction system which consists of:

- High efficiency, low uptake, concentric glass nebulizer designed to efficiently nebulize single-cell suspensions without compromising cell integrity
- Low volume, on-axis, laminar-flow spray chamber directly coupled to the ICP for the highest transport efficiency of the nebulized single-cell
- Patent pending MicroJet gas adapter which entrains and shapes the aerosol plume to reduce cell deposition onto the spray chamber walls and increase sample transport efficiency suspension

Single-Cell Sample Introduction System

For Agilent 7900 ICP-MS

KT-1155

WindTunnel Autosampler Enclosure



Autosampler Enclosure



Autosampler Enclosure XLR8

The WindTunnel autosampler enclosure will protect your samples against airborne contaminants and also protect analysts from fumes and odours. Its versatile configuration makes it suitable for the most common laboratory situations:

**Filtered positive pressure enclosure.** When fitted with the optional fan and HEPA filter, the WindTunnel provides a positive pressure enclosure.

**Vented enclosure.** The addition of the optional flange, allows the fumes to be removed through a laboratory exhaust system (not supplied).

**Dust cover.** The WindTunnel can be used without the fan and filter to function as a convenient dust cover.

- Suitable for the Cetac 130, 260, 280, 520, 520HS and 560 plus PerkinElmer AS93+ and S10, and Agilent SPS-3 autosamplers
- Shatter-proof polycarbonate construction
- Easy access through front and rear roll-up doors
- Optional fan maintains positive pressure
- Optional HEPA filter
- Optional exhaust port flange
- Multiple ports for tubing and power cords
- Larger model suitable for Cetac XLR8 and XLR-860 autosampler

WindTunnel Autosampler Enclosure

|                                       |             |
|---------------------------------------|-------------|
| WindTunnel Autosampler Enclosure      | 70-803-1148 |
| WindTunnel Autosampler Enclosure XLR8 | 70-803-1199 |
| WindTunnel Fan Aus                    | 70-803-1149 |
| WindTunnel Fan Eur                    | 70-803-1150 |
| WindTunnel Fan USA                    | 70-803-1151 |
| WindTunnel Filter                     | 70-803-1152 |
| WindTunnel Flange                     | 70-803-1153 |
| WindTunnel Base                       | 70-803-1178 |
| WindTunnel Base for XLR8 Enclosure    | 70-803-1205 |

## Laser Ablation

### Standard cup size of 13mm

P/N: 21-809-4309



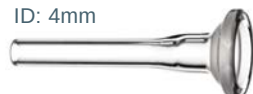
P/N: 21-809-4140



P/N: 31-808-3863  
(Compatible with iCAP Q/RQ/TQ)  
OD: 4mm  
ID: 2mm



P/N: 21-809-0965C  
OD: 6mm  
ID: 4mm



P/N: 31-808-3045  
ID: 4mm



P/N: 31-800-1007  
OD: 4mm  
ID: 2mm



## Autosampler Probes



### For Cetac 260, 280, 520, 520HS, 560, 860 and XLR8

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID with EzyFit 70-803-1088

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID with UniFit 70-803-1380

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

### For Cetac ASX 110

PFA sheathed Autosampler Probe 0.25mm ID with EzyFit 70-803-1072

PFA sheathed Autosampler Probe 0.25mm ID with UniFit 70-803-1073

PTFE Encapsulated Carbon Fibre Probe 0.3mm ID with UniFit 70-803-1191

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-1182

### For Agilent SPS 3/SPS 4

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID 70-803-0910

PTFE Encapsulated Carbon Fibre Probe 0.50mm ID 70-803-0909

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-0908

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0853

### For Agilent I-AS

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID with UniFit, 1100mm total length 60-703-1010

PTFE Encapsulated Carbon Fibre Probe 0.3mm ID with UniFit, 686 mm total length 60-703-1009

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 60-703-0533

### For PerkinElmer S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID with UniFit 70-803-0991

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0816

### For Shimadzu

PTFE Encapsulated Carbon Fibre Probe 0.3mm ID with UniFit, for Shimadzu ASC-6100F/9800 70-803-1200

PTFE Coated Viton O-rings (PKT 10) With UniFit, for Shimadzu AS10 70-803-1477

## Glass DC Nebulizers

### SeaSpray

400µL/min uptake      A13-1-USS04X

### MicroMist

400µL/min uptake      A13-1-UM04X

200µL/min uptake      A13-1-UM02X

100µL/min uptake      A13-1-UM01Q

50µL/min uptake      A13-1-UM005Q

### Conikal

1mL/min uptake      A13-1-UC1X



## DC Nebulizers for HF

### OpalMist

400µL/min uptake      A13-1-PFA04X

200µL/min uptake      A13-1-PFA02X

100µL/min uptake      A13-1-PFA01Q

50µL/min uptake      A13-1-PFA005Q



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

Glass Spray Chamber      KT-1103-XR

Quartz Spray Chamber      KT-1103Q-XR

PFA Spray Chamber      KT-1103P-XR



## Peltier Controlled Cyclonic Spray Chambers

Glass Spray Chamber      KT-1116

Quartz Spray Chamber      KT-1116Q

PFA Spray Chamber      KT-1116P



## Spray Chambers

### Twister

50mL Cyclonic with Aux.      20-809-2574HE



### Cinnabar

20mL Cyclonic with Aux.      20-809-2575HE

### Twinnabar

20mL Cyclonic with Aux.      20-809-2577HE

## Spray Chambers for HF

### Tracey PFA44

44ml Cyclonic with Aux.      20-809-2578



## Torches

### D-Torch

30-808-3305

#### Comprises:

Base and Inner Tube      31-808-3196

Quartz Outer Tube      31-808-3022

Injector Adaptor      31-808-3072

Injector Ferrule      31-808-2962

Quartz Connector      31-808-3303

### D-Torch for HF

30-808-3467

#### Comprises:

Base and Inner Tube      31-808-3196

Quartz Outer Tube      31-808-3022

Injector Adaptor      31-808-3072

Injector Ferrule      31-808-2962

PFA Connector      31-808-3281

#### D-Torch Options:

PFA Connector with Dilution Port      31-808-3281

PFA Connector with 45° Dilution Port      31-808-3672

Gas Line for PFA Connector 31-808-3672      70-803-1290



## Torches

### Tapered Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 2.5mm  | 31-808-3302 |
| Alumina Injector 2.4mm | 31-808-3205 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.4mm | 31-808-3378 |
|-------------------------|-------------|

### Quartz Torches

|                     |             |
|---------------------|-------------|
| with 1.0mm Injector | 30-807-0558 |
| with 1.5mm Injector | 30-807-0557 |
| with 2.0mm Injector | 30-807-3608 |
| with 2.5mm Injector | 30-807-0556 |



### Torch Options

|                                           |             |
|-------------------------------------------|-------------|
| Quartz Torch Bonnet                       | 31-808-2577 |
| Quartz Connector with Dilution Port       | 31-808-3217 |
| Quartz Connector with 45deg Dilution Port | 31-808-3280 |
| Straight Quartz Connector                 | 31-808-3288 |
| Clamp (PKT 2)                             | 70-803-0846 |



## RF Coils

|        |              |
|--------|--------------|
| Copper | 70-900-7700C |
|--------|--------------|



|        |              |
|--------|--------------|
| Silver | 70-900-7700S |
|--------|--------------|



|      |              |
|------|--------------|
| Gold | 70-900-7700G |
|------|--------------|



|                          |              |
|--------------------------|--------------|
| RF Coil Installation Kit | 70-900-7500T |
|--------------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                                          |             |
|------------------------------------------|-------------|
| Elegra Dual Two-channel Argon Humidifier | 70-803-1273 |
|------------------------------------------|-------------|



### Guardian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Agilent I-AS

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.25mm ID                            | 60-703-1010 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.3mm ID                             | 60-703-1009 |

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |



### For SPS 3/SPS 4

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.75mm ID                            | 70-803-0908 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 1.0mm ID                             | 70-803-0853 |

## Glass DC Nebulizers

### SeaSpray

400µL/min uptake      A13-1-USS04X

### MicroMist

400µL/min uptake      A13-1-UM04X  
200µL/min uptake      A13-1-UM02X  
100µL/min uptake      A13-1-UM01Q  
50µL/min uptake      A13-1-UM005Q



### Conikal

1mL/min uptake      A13-1-UC1X

## DC Nebulizers for HF

### OpalMist

400µL/min uptake      A13-1-PFA04X  
200µL/min uptake      A13-1-PFA02X  
100µL/min uptake      A13-1-PFA01Q  
50µL/min uptake      A13-1-PFA005Q



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

Glass Spray Chamber      KT-1140-XR  
Quartz Spray Chamber      KT-1140Q-XR  
PFA Spray Chamber      KT-1140P-XR



## Peltier Controlled Cyclonic Spray Chambers

Glass Spray Chamber      KT-1116  
Quartz Spray Chamber      KT-1116Q  
PFA Spray Chamber      KT-1116P



## Spray Chambers

### Twister

20mL Cyclonic with Aux.      20-809-2574HE

### Cinnabar

20mL Cyclonic with Aux.      20-809-2575HE

### Twinnabar

20mL Cyclonic with Aux.      20-809-2577HE



## Spray Chambers for HF

### Tracey PFA44

44ml Cyclonic with Aux.      20-809-2578



## Torches

### D-Torch

30-808-3305

#### Comprises:

Base and Inner Tube      31-808-3196  
Quartz Outer Tube      31-808-3022  
Injector Adaptor      31-808-3072  
Injector Ferrule      31-808-2962  
Quartz Connector      31-808-3303



### D-Torchfor HF

30-808-3467

#### Comprises:

Base and Inner Tube      31-808-3196  
Quartz Outer Tube      31-808-3022  
Injector Adaptor      31-808-3072  
Injector Ferrule      31-808-2962  
PFA Connector      31-808-3281

#### D-Torch Options:

PFA Connector with Dilution Port      31-808-3281  
PFA Connector with 45° Dilution Port      31-808-3672  
Gas Line for PFA Connector 31-808-3672      70-803-1290



## Torches

### Tapered Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 2.5mm  | 31-808-3302 |
| Alumina Injector 2.4mm | 31-808-3205 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.4mm | 31-808-3378 |
|-------------------------|-------------|

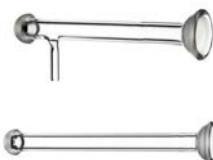
### Quartz Torches

|                     |             |
|---------------------|-------------|
| with 1.0mm Injector | 30-807-0558 |
| with 1.5mm Injector | 30-807-0557 |
| with 2.0mm Injector | 30-807-3608 |
| with 2.5mm Injector | 30-807-0556 |



### Torch Options

|                                           |             |
|-------------------------------------------|-------------|
| Quartz Torch Bonnet                       | 31-808-2577 |
| Quartz Connector with Dilution Port       | 31-808-3217 |
| Quartz Connector with 45deg Dilution Port | 31-808-3280 |
| Straight Quartz Connector                 | 31-808-3288 |
| Clamp (PKT 2)                             | 70-803-0846 |



## RF Coils

|        |              |
|--------|--------------|
| Copper | 70-900-7800C |
|--------|--------------|



|        |              |
|--------|--------------|
| Silver | 70-900-7800S |
|--------|--------------|



|      |              |
|------|--------------|
| Gold | 70-900-7800G |
|------|--------------|



|                          |              |
|--------------------------|--------------|
| RF Coil Installation Kit | 70-900-7500T |
|--------------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                                          |             |
|------------------------------------------|-------------|
| Elegra Dual Two-channel Argon Humidifier | 70-803-1273 |
|------------------------------------------|-------------|



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Agilent I-AS

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.25mm ID                            | 60-703-1010 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.3mm ID                             | 60-703-1009 |

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |



### For SPS 3/SPS 4

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.75mm ID                            | 70-803-0908 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 1.0mm ID                             | 70-803-0853 |

## Glass DC Nebulizers

### SeaSpray

400µL/min uptake      A13-1-USS04X

### MicroMist

400µL/min uptake      A13-1-UM04X  
200µL/min uptake      A13-1-UM02X  
100µL/min uptake      A13-1-UM01Q  
50µL/min uptake      A13-1-UM005Q

### Conikal

1mL/min uptake      A13-1-UC1X



## DC Nebulizers for HF

### OpalMist

400µL/min uptake      A13-1-PFA04X  
200µL/min uptake      A13-1-PFA02X  
100µL/min uptake      A13-1-PFA01Q  
50µL/min uptake      A13-1-PFA005Q



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

Glass Spray Chamber      KT-1140-XR  
Quartz Spray Chamber      KT-1140Q-XR  
PFA Spray Chamber      KT-1140P-XR



## Peltier Controlled Cyclonic Spray Chambers

Glass Spray Chamber      KT-1116  
Quartz Spray Chamber      KT-1116Q  
PFA Spray Chamber      KT-1116P



## Spray Chambers

### Twister

50mL Cyclonic with Aux.      20-809-2574HE



### Cinnabar

20mL Cyclonic with Aux.      20-809-2575HE

### Twinnabar

20mL Cyclonic with Aux.      20-809-2577HE

### Quartz Scott Style

For 7900 UHMI      20-809-4144

## Spray Chambers for HF

### Tracey PFA44

44ml Cyclonic with Aux.      20-809-2578



## Torches

### D-Torch

30-808-3305

#### Comprises:

Base and Inner Tube      31-808-3196  
Quartz Outer Tube      31-808-3022  
Injector Adaptor      31-808-3072  
Injector Ferrule      31-808-2962  
Quartz Connector      31-808-3303



### D-Torch for HF

30-808-3467

#### Comprises:

Base and Inner Tube      31-808-3196  
Quartz Outer Tube      31-808-3022  
Injector Adaptor      31-808-3072  
Injector Ferrule      31-808-2962  
PFA Connector      31-808-3281

#### D-Torch Options:

PFA Connector with Dilution Port      31-808-3281  
PFA Connector with 45° Dilution Port      31-808-3672



## Torches

### Tapered Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 2.5mm  | 31-808-3302 |
| Alumina Injector 2.4mm | 31-808-3205 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.4mm | 31-808-3378 |
|-------------------------|-------------|

### Quartz Torches

|                     |             |
|---------------------|-------------|
| with 1.0mm Injector | 30-807-0558 |
| with 1.5mm Injector | 30-807-0557 |
| with 2.0mm Injector | 30-807-3608 |
| with 2.5mm Injector | 30-807-0556 |



### Torch Options

|                                           |             |
|-------------------------------------------|-------------|
| Quartz Torch Bonnet                       | 31-808-2577 |
| Quartz Connector with Dilution Port       | 31-808-3217 |
| Quartz Connector with 45deg Dilution Port | 31-808-3280 |
| Straight Quartz Connector                 | 31-808-3288 |
| Clamp (PKT 2)                             | 70-803-0846 |



## RF Coils

|        |              |
|--------|--------------|
| Copper | 70-900-7800C |
|--------|--------------|



|        |              |
|--------|--------------|
| Silver | 70-900-7800S |
|--------|--------------|



|      |              |
|------|--------------|
| Gold | 70-900-7800G |
|------|--------------|



|                          |              |
|--------------------------|--------------|
| RF Coil Installation Kit | 70-900-7500T |
|--------------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                                          |             |
|------------------------------------------|-------------|
| Elegra Dual Two-channel Argon Humidifier | 70-803-1273 |
|------------------------------------------|-------------|



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



### Single-Cell SC-SIS

|                                                         |         |
|---------------------------------------------------------|---------|
| High Sensitivity Single-Cell Sample Introduction System | KT-1155 |
|---------------------------------------------------------|---------|



## Autosampler Probes

(See page 12 for complete list of probes)

### For Agilent I-AS

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.25mm ID                            | 60-703-1010 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.3mm ID                             | 60-703-1009 |

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |



### For SPS 3/SPS 4

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.75mm ID                            | 70-803-0908 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 1.0mm ID                             | 70-803-0853 |

## Glass DC Nebulizers

### SeaSpray

400µL/min uptake      A13-1-USS04X

### MicroMist

400µL/min uptake      A13-1-UM04X

200µL/min uptake      A13-1-UM02X

100µL/min uptake      A13-1-UM01Q

50µL/min uptake      A13-1-UM005Q

### Conikal

1mL/min uptake      A13-1-UC1X



## DC Nebulizers for HF

### OpalMist

400µL/min uptake      A13-1-PFA04X

200µL/min uptake      A13-1-PFA02X

100µL/min uptake      A13-1-PFA01Q

50µL/min uptake      A13-1-PFA005Q



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

Glass spray chamber      KT-1103-XR

Quartz spray chamber      KT-1103Q-XR

PFA spray chamber      KT-1103P-XR



## Peltier Controlled Cyclonic Spray Chambers

Glass Spray Chamber      KT-1116

Quartz Spray Chamber      KT-1116Q

PFA Spray Chamber      KT-1116P



## Spray Chambers

### Twister

50mL Cyclonic with Aux.      20-809-2574HE



### Cinnabar

20mL Cyclonic with Aux.      20-809-2575HE

### Twinnabar

20mL Cyclonic with Aux.      20-809-2577HE

### Quartz Scott Style

For 7900 UHMI      20-809-4144

## Spray Chambers for HF

### Tracey PFA44

44ml Cyclonic with Aux.      20-809-2578



## Torches

### D-Torch

30-808-3305

#### Comprises:

Base and Inner Tube      31-808-3196

Quartz Outer Tube      31-808-3022

Injector Adaptor      31-808-3072

Injector Ferrule      31-808-2962

Quartz Connector      31-808-3303

### D-Torch for HF

30-808-3467

#### Comprises:

Base and Inner Tube      31-808-3196

Quartz Outer Tube      31-808-3022

Injector Adaptor      31-808-3072

Injector Ferrule      31-808-2962

PFA Connector      31-808-3281



## Torches

### D-Torch Options:

|                                        |             |
|----------------------------------------|-------------|
| PFA Connector with Dilution Port       | 31-808-3281 |
| PFA Connector with 45° Dilution Port   | 31-808-3672 |
| Gas Line for PFA Connector 31-808-3672 | 70-803-1290 |



### Tapered Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 2.5mm  | 31-808-3302 |
| Alumina Injector 2.4mm | 31-808-3205 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.4mm | 31-808-3378 |
|-------------------------|-------------|

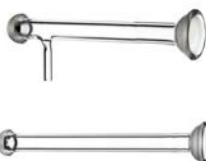
### Quartz Torches

|                     |             |
|---------------------|-------------|
| with 1.0mm Injector | 30-807-0558 |
| with 1.5mm Injector | 30-807-0557 |
| with 2.0mm Injector | 30-807-3608 |
| with 2.5mm Injector | 30-807-0556 |



### Torch Options

|                                           |             |
|-------------------------------------------|-------------|
| Quartz Torch Bonnet                       | 31-808-2577 |
| Quartz Connector with Dilution Port       | 31-808-3217 |
| Quartz Connector with 45deg Dilution Port | 31-808-3280 |
| Straight Quartz Connector                 | 31-808-3288 |
| Clamp (PKT 2)                             | 70-803-0846 |



## RF Coils

|        |              |
|--------|--------------|
| Copper | 70-900-7700C |
| Silver | 70-900-7700S |
| Gold   | 70-900-7700G |



|                                 |              |
|---------------------------------|--------------|
| <b>RF Coil Installation Kit</b> | 70-900-7500T |
|---------------------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                                          |             |
|------------------------------------------|-------------|
| Elegra Dual Two-channel Argon Humidifier | 70-803-1273 |
|------------------------------------------|-------------|



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Agilent I-AS

|                                                |             |
|------------------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe 0.25mm ID | 60-703-1010 |
| PTFE Encapsulated Carbon Fibre Probe 0.3mm ID  | 60-703-1009 |

### For Cetac ASX-520

|                                                |              |
|------------------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe 0.5mm ID  | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe 0.5mm ID  | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe 0.75mm ID | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe 1.0mm ID  | 70-803-0793  |



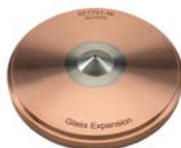
### For SPS 3/SPS 4

|                                                |             |
|------------------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe 0.75mm ID | 70-803-0908 |
| PTFE Encapsulated Carbon Fibre Probe 1.0mm ID  | 70-803-0853 |

## 7700/7800/7900/8800/8900 - Sampler Cones

### Sampler Cones

Nickel Sampler AT7701-Ni



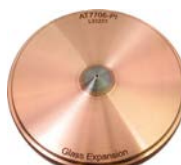
Nickel Plated Sampler AT7701-Ni/Ni



Aluminium Sampler AT7701-Al

Platinum Sampler AT7706-Pt

Platinum Sampler (18mm insert) AT7706A-Pt



Platinum Sampler Boron free AT7706-Pt-BF

Platinum Nickel Plated Sampler AT7706-Pt/NiP

Platinum Sampler with Nickel Base AT7706-Pt/Ni

Platinum Sampler with Nickel Base (15mm insert) AT7706B-Pt/Ni

## 7700x/7800/8800 - Skimmer Cones

### Skimmer Cones

Nickel Skimmer AT7702X-Ni



Aluminium Skimmer AT7702X-Al

Platinum Skimmer with Copper Base AT7708X-Pt



Platinum Skimmer Cone with Copper Base Boron free AT7708X-Pt-BF

Platinum Skimmer Cone with Nickel Base AT7708X-Pt/Ni



Platinum Cones Require Brass Skimmer Base (Agilent P/N G3280-6063)

## 7700s - Skimmer Cones

Nickel Skimmer AT7702S-Ni



Platinum Skimmer Cone AT7708S-Pt



Platinum Skimmer Cone with Nickel Base AT7708S-Pt/Ni



## 7900/8900 - Skimmer Cones

Nickel Skimmer Cone AT7902X-Ni

Aluminium Skimmer Cone AT7902X-Al



Platinum Skimmer Cone with Copper Base AT7908X-Pt



Platinum Skimmer Cone with Nickel Base AT7908X-Pt/Ni



## Cone Options

### ConeGuard Thread Protectors

Skimmer Cone Guard For 7700s/7900 70-803-1004



Skimmer Cone Guard For 7700x/7800/8800/8900 70-803-1008



Retaining Ring For 7700 Sampler Cone AT7704



Graphite Gasket (PKT 3) For 7700/7900/8800/8900 Sampler Cone AT7703

Long Life Shield Plate For 7700/7800/7900/8800/8900 AT5004



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A13-07-USS2  |
| 400µL/min uptake | A13-07-USS04 |

### MicroMist

|                  |             |
|------------------|-------------|
| 400µL/min uptake | A13-07-UM04 |
| 200µL/min uptake | A13-07-UM02 |

### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A13-07-UC2 |
| 1mL/min uptake | A13-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A13-07-US6 |
|----------------|------------|



## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A13-07-DM1  |
| 400µL/min uptake | A13-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A13-07-PFA2   |
| 600µL/min uptake | A13-07-PFA06  |
| 200µL/min uptake | A13-07-PFA02  |
| 100µL/min uptake | A13-07-PFA01  |
| 50µL/min uptake  | A13-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A13-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1137-XR  |
| Quartz Spray Chamber | KT-1137Q-XR |
| PFA Spray Chamber    | KT-1137P-XR |



## Spray Chambers

### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-9199HE |
|---------------|---------------|



### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-808-8882HE |
|---------------|---------------|



### HydraMist Simultaneous Cold Vapor/ Pneumatic Nebulization Spray Chamber

|             |         |
|-------------|---------|
| Hydride Kit | KT-1157 |
|-------------|---------|



## Spray Chambers for HF

### Twister TFE Spray Chamber

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-3452 |
|---------------|-------------|



### Tracey TFE Spray Chamber

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-2507 |
|---------------|-------------|



## Torches

### D-Torch

SVDV/VDV 30-808-3560

#### Comprises:

Base and Inner Tube 31-808-3568  
 Quartz Outer Tube 31-808-3570  
 Retaining Ring 31-808-3566  
 Injector Ferrule 31-808-2962  
 Injector Adaptor 31-808-3578



RV 30-808-3590

#### Comprises:

Base and Inner Tube 31-808-3568  
 Quartz Outer Tube 31-808-3582  
 Retaining Ring 31-808-3566  
 Injector Ferrule 31-808-2962  
 Injector Adaptor 31-808-3578

#### D-Torch Options:

Ceramic Outer Tube for SVDV/VDV 31-808-3580  
 Ceramic Outer Tube for RV 31-808-3586  
 Quartz Outer Tube for SVDV/VDV 31-808-3570  
 Quartz Outer Tube for RV 31-808-3582



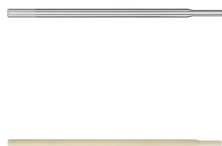
### Quartz Torch

SVDV/VDV 31-808-3557  
 RV 31-808-3556



### Tapered Injectors

Quartz Injector 0.8mm 31-808-3738  
 Quartz Injector 1.4mm 31-808-3583  
 Quartz Injector 1.8mm 31-808-3576  
 Quartz Injector 2.4mm 31-808-3584  
 Alumina Injector 1.5mm 31-808-3727  
 Alumina Injector 1.8mm 31-808-3585  
 Alumina Injector 2.4mm 31-808-3722



## RF Coils

Silver 70-900-5100S  
 Gold 70-900-5100G

## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1268



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362  
 Guardian in-line sample filter 70-803-1108



### Trident Internal Standard Kit

Standard Kit 60-808-1185  
 Standard Kit for HF 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L  
 PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784  
 PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443  
 PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

### For SPS 3/SPS 4

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-0908  
 PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0853



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A11-07-USS2  |
| 400µL/min uptake | A11-07-USS04 |

### MicroMist

|                  |             |
|------------------|-------------|
| 400µL/min uptake | A11-07-UM04 |
| 200µL/min uptake | A11-07-UM02 |

### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A11-07-UC2 |
| 1mL/min uptake | A11-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A11-07-US6 |
|----------------|------------|



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0600HE |
|---------------|---------------|



### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0285HE |
|---------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0183HE |
|---------------|---------------|



### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0448HE |
|---------------|---------------|



## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A11-07-DM1  |
| 400µL/min uptake | A11-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A11-07-PFA2   |
| 600µL/min uptake | A11-07-PFA06  |
| 200µL/min uptake | A11-07-PFA02  |
| 100µL/min uptake | A11-07-PFA01  |
| 50µL/min uptake  | A11-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A11-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                                            |             |
|--------------------------------------------|-------------|
| Glass Spray Chamber                        | KT-1014-XR  |
| PFA Spray Chamber                          | KT-1014P-XR |
| All Glass System                           | KT-1054-XR  |
| PFA Spray Chamber includes Niagara bracket | KT-1020P-XR |



## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-9188 |
|---------------|-------------|



### Mounting Bracket for HF Spray Chamber

|             |
|-------------|
| 21-100-0364 |
|-------------|



### PuraFlex Transfer Tube

|             |
|-------------|
| 21-809-2831 |
|-------------|

Connects spray chamber to torch. Requires adjustable mount 21-100-0215, or for HF, 21-100-0364.



## Torches

### D-Torch

30-808-2919

#### Comprises:

|                               |             |
|-------------------------------|-------------|
| Base and Inner Tube           | 31-808-2918 |
| Quartz Outer Tube             | 31-808-2685 |
| Retaining Ring for Outer Tube | 31-808-2818 |
| Retaining Ring for Injector   | 31-808-2921 |



#### D-Torch Options:

|                                  |             |
|----------------------------------|-------------|
| Ceramic Outer Tube               | 31-808-3027 |
| PuraFlex Transfer Tube with bend | 21-809-3707 |



### Tapered Injectors for D-Torch

|                                       |             |
|---------------------------------------|-------------|
| Quartz Injector 0.8mm                 | 31-808-3364 |
| Quartz Injector 1.5mm                 | 31-808-3591 |
| Quartz Injector 1.8mm                 | 31-808-3640 |
| Quartz Injector 2.4mm                 | 31-808-3043 |
| Quartz Injector 2.4mm with Ball Joint | 31-808-3110 |



### Alumina Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Alumina Injector 1.8mm | 31-808-3325 |
| Alumina Injector 2.4mm | 31-808-3133 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.0mm | 31-808-3355 |
|-------------------------|-------------|



### Fixed Torches

|                                                                          |             |
|--------------------------------------------------------------------------|-------------|
| Quartz Torch with 90° Bend and 2.3mm Injector                            | 30-808-0478 |
| Quartz Torch (High Solids, short) with 90° Bend and 2.3mm Injector       | 30-808-9983 |
| Quartz Torch (High Solids, Full-Length) with 90° Bend and 2.3mm Injector | 30-807-0528 |
| Quartz Torch with 90° Bend and 1.8mm Injector                            | 30-808-3315 |
| Quartz Torch with 90° Bend and 0.8mm Injector                            | 30-808-1346 |



### Fixed Torches for All Glass System

|                                                                                            |             |
|--------------------------------------------------------------------------------------------|-------------|
| Quartz Torch with 2.3mm Injector and Right Angle Ball Joint                                | 30-808-0540 |
| Quartz Torch with 1.8mm Capillary Injector - (for oil analysis) and Right Angle Ball Joint | 30-808-0887 |
| Quartz Torch (High Solids) with 2.3mm Injector and Right Angle Ball Joint                  | 30-808-1255 |
| Quartz Torch (organics) with 0.8mm Injector and Right Angle Ball Joint                     | 30-808-8216 |



## Torches

### Semi Demountable Torch with Quartz Injector

30-808-0379

#### Comprises:

|                                                   |             |
|---------------------------------------------------|-------------|
| Quartz Torch Body                                 | 31-808-0353 |
| Tapered Quartz Injector 2.4mm                     | 31-808-0400 |
| Torch Adaptor                                     | 31-808-0863 |
| GazFit Connectors (PKT 4) - for 6mm OD side arms  | GAZ-06      |
| GazFit Connectors (PKT 2) - for 8mm torch adaptor | GAZ-08      |



### Semi Demountable Torch with Alumina Injector

30-808-0383

#### Comprises:

|                                                   |             |
|---------------------------------------------------|-------------|
| Quartz Torch Body                                 | 31-808-0353 |
| Tapered Alumina Injector 2.4mm                    | 31-808-0401 |
| Torch Adaptor                                     | 31-808-0863 |
| GazFit Connectors (PKT 4) - for 6mm OD side arms  | GAZ-06      |
| GazFit Connectors (PKT 2) - for 8mm torch adaptor | GAZ-08      |



### Semi Demountable Torch Options

|                                             |             |
|---------------------------------------------|-------------|
| Quartz Torch Body - Short (for high solids) | 31-808-0177 |
|---------------------------------------------|-------------|

### Tapered Injectors for Semi Demountable Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 1.0mm  | 31-808-0544 |
| Quartz Injector 1.5mm  | 31-808-0543 |
| Quartz Injector 1.8mm  | 31-808-0545 |
| Quartz Injector 2.4mm  | 31-808-0400 |
| Alumina Injector 1.8mm | 31-808-0814 |
| Alumina Injector 2.4mm | 31-808-0401 |



### Sapphire Injectors for Semi Demountable Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.4mm | 31-808-1426 |
|-------------------------|-------------|

## RF Coils

### RF Coils for Vista Axial

Gold 70-900-1000G



Silver 70-900-1000S



Silver, Teflon Coated 70-900-1000ST



Installation kit 70-900-1000T



### RF Coils for 700ES Axial

Gold 70-900-1004G



Silver 70-900-1004S



Silver, Teflon Coated 70-900-1004ST



Installation kit 70-900-1004T



## Kits

**Axial All Glass System** KT-8045A

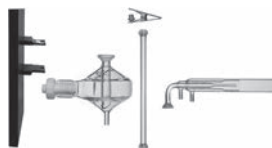
Kit Comprises:

Twister Spray Chamber 20-809-9199HE

Quartz Torch RA/FS13 & 2.3mm Injector 30-808-0540

Glass Transfer Tube-206, + JC-13 Clip 31-809-0274

Adjustable Mount 21-100-0215



## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1265



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

### For SPS 3/SPS 4

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-0908

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0853



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A11-07-USS2  |
| 400µL/min uptake | A11-07-USS04 |

### MicroMist

|                  |             |
|------------------|-------------|
| 400µL/min uptake | A11-07-UM04 |
| 200µL/min uptake | A11-07-UM02 |

### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A11-07-UC2 |
| 1mL/min uptake | A11-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A11-07-US6 |
|----------------|------------|



## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A11-07-DM1  |
| 400µL/min uptake | A11-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A11-07-PFA2   |
| 600µL/min uptake | A11-07-PFA06  |
| 200µL/min uptake | A11-07-PFA02  |
| 100µL/min uptake | A11-07-PFA01  |
| 50µL/min uptake  | A11-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A11-07-CV6 |
|----------------------|------------|



## IsoMist

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Quartz Spray Chamber | KT-1022-XR  |
| PFA Spray Chamber    | KT-1022P-XR |
| All Glass System     | KT-1055-XR  |



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0600HE |
|---------------|---------------|



### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0285HE |
|---------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0183HE |
|---------------|---------------|



### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0448HE |
|---------------|---------------|



## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-9188 |
|---------------|-------------|



### Mounting Bracket for HF Spray Chamber

|             |
|-------------|
| 21-809-2555 |
|-------------|



### PuraFlex Transfer Tube

|             |
|-------------|
| 21-809-2735 |
|-------------|

Connects spray chamber to torch.  
Requires adjustable mount 21-100-0200,  
or for HF, 21-809-2555.



## Torches

### D-Torch 30-808-3052

#### Comprises:

|                               |             |
|-------------------------------|-------------|
| Base and Inner Tube           | 31-808-3146 |
| Quartz Outer Tube             | 31-808-3062 |
| Retaining Ring for Outer Tube | 31-808-2818 |
| Retaining Ring for Injector   | 31-808-2921 |

#### D-Torch Options:

|                    |             |
|--------------------|-------------|
| Ceramic Outer Tube | 31-808-3092 |
|--------------------|-------------|



### Tapered Injectors for D-Torch

|                                       |             |
|---------------------------------------|-------------|
| Quartz Injector 0.8mm                 | 31-808-3195 |
| Quartz Injector 1.5mm                 | 31-808-3058 |
| Quartz Injector 1.5mm with Ball Joint | 31-808-3150 |
| Quartz Injector 2.4mm with Ball Joint | 31-808-2925 |



### Alumina Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Alumina Injector 1.5mm | 31-808-3230 |
| Alumina Injector 1.8mm | 31-808-3160 |



### Sapphire Injectors for D-Torch

|                         |             |
|-------------------------|-------------|
| Sapphire Injector 2.0mm | 31-808-3312 |
|-------------------------|-------------|

### Semi Demountable Torch with Quartz Injector

|             |  |
|-------------|--|
| 30-808-0542 |  |
|-------------|--|

#### Comprises:

|                                                |             |
|------------------------------------------------|-------------|
| Torch Body, Quartz                             | 31-808-0541 |
| Torch Adaptor 8/44                             | 31-808-2638 |
| Tapered Quartz Injector 1.5mm                  | 31-808-0543 |
| GazFit Connectors (PKT 4) for 6mm OD side arms | GAZ-06      |



### Semi Demountable Torch HF with Alumina Injector

|             |  |
|-------------|--|
| 30-808-0942 |  |
|-------------|--|

#### Comprises:

|                                                |             |
|------------------------------------------------|-------------|
| Torch Body, Quartz                             | 31-808-0541 |
| Torch Adaptor 8/44                             | 31-808-2638 |
| Tapered Alumina Injector 1.8mm                 | 31-808-0938 |
| GazFit Connectors (PKT 4) for 6mm OD side arms | GAZ-06      |



### Tapered Injectors for Semi Demountable Torch

|                       |             |
|-----------------------|-------------|
| Quartz Injector 1.0mm | 31-808-0544 |
| Quartz Injector 1.5mm | 31-808-0543 |
| Quartz Injector 1.8mm | 31-808-0545 |
| Quartz Injector 2.4mm | 31-808-0400 |



## Torches

### Fixed Torches

|                                           |             |
|-------------------------------------------|-------------|
| Quartz Torch, 0.8mm Injector              | 30-807-0539 |
| Quartz Torch, Low Flow, 1.5mm Injector    | 30-800-0015 |
| Quartz Torch, High Solids, 1.8mm Injector | 30-808-1182 |



### Quartz Torch Bonnet 31-800-0003



## RF Coils

### RF Coils for Vista Radial

|      |              |
|------|--------------|
| Gold | 70-900-1001G |
|------|--------------|



|        |              |
|--------|--------------|
| Silver | 70-900-1001S |
|--------|--------------|



|                       |               |
|-----------------------|---------------|
| Silver, Teflon Coated | 70-900-1001ST |
|-----------------------|---------------|



|                  |              |
|------------------|--------------|
| Installation kit | 70-900-1001T |
|------------------|--------------|



### RF Coils for 700ES Radial

|      |              |
|------|--------------|
| Gold | 70-900-1005G |
|------|--------------|



|        |              |
|--------|--------------|
| Silver | 70-900-1005S |
|--------|--------------|



|                       |               |
|-----------------------|---------------|
| Silver, Teflon Coated | 70-900-1005ST |
|-----------------------|---------------|



|                  |              |
|------------------|--------------|
| Installation kit | 70-900-1005T |
|------------------|--------------|



## Kits

### Radial All Glass System Kit KT-8046A

#### Kit Comprises:

|                                                 |               |
|-------------------------------------------------|---------------|
| Twister Spray Chamber                           | 20-809-9199HE |
| Radial Torch with Ball Joint and 1.5mm Injector | 30-808-0875   |
| Glass Transfer Tube-160, + JC-13 Clip           | 31-809-0549   |
| Adjustable Mount                                | 21-100-0200   |

#### All Glass System Options

|                                                             |             |
|-------------------------------------------------------------|-------------|
| Jacketed Spray Chamber                                      |             |
| Adjustable Mount                                            | 21-100-0217 |
| Quartz Torch with Ball Joint and 1.8mm Injector High Solids | 30-807-0536 |
| Quartz Torch with Ball Joint and 2.4mm Injector High Solids | 30-807-0569 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |

### For SPS 3/SPS 4

|                                      |             |
|--------------------------------------|-------------|
| PTFE Encapsulated Carbon Fibre Probe |             |
| 0.75mm ID                            | 70-803-0908 |
| PTFE Encapsulated Carbon Fibre Probe |             |
| 1.0mm ID                             | 70-803-0853 |



## Common Accessories

### Elegra Argon Humidifier

|                         |             |
|-------------------------|-------------|
| Elegra Argon Humidifier | 70-803-1265 |
|-------------------------|-------------|



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Glass DC Nebulizers

### SeaSpray

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A22-1-USS1  |
| 400µL/min uptake | A22-1-USS04 |

### MicroMist

|                  |             |
|------------------|-------------|
| 400µL/min uptake | A22-1-UM04  |
| 200µL/min uptake | A22-1-UM02  |
| 100µL/min uptake | A22-1-UM01  |
| 50µL/min uptake  | A22-1-UM005 |



## DC Nebulizers for HF

### OpalMist

|                  |              |
|------------------|--------------|
| 400µL/min uptake | A22-1-PFA04  |
| 200µL/min uptake | A22-1-PFA02  |
| 100µL/min uptake | A22-1-PFA01  |
| 50µL/min uptake  | A22-1-PFA005 |



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                         |             |
|-------------------------|-------------|
| Glass Spray chamber     | KT-1096-XR  |
| Quartz spray chamber    | KT-1096Q-XR |
| PFA spray chamber       | KT-1096P-XR |
| Twinnabar spray chamber | KT-1096T-XR |



## Spray Chambers

### Twister

|                           |               |
|---------------------------|---------------|
| 50mL Cyclonic (Aux. Port) | 20-809-3594HE |
|---------------------------|---------------|

### Twister

|                                    |               |
|------------------------------------|---------------|
| 50mL Cyclonic<br>(2.4mm Aux. Port) |               |
| Inline Screw Mount                 | 20-809-3841HE |

### Twister

|                                    |               |
|------------------------------------|---------------|
| 50mL Cyclonic<br>(2.4mm Aux. Port) |               |
| 90deg Screw Mount                  | 20-809-3854HE |

### Twister

|                                   |               |
|-----------------------------------|---------------|
| 50mL Cyclonic<br>with Screw Mount | 20-809-3892HE |
|-----------------------------------|---------------|

## Spray Chambers

### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-3650HE |
|---------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-3709HE |
|---------------|---------------|



## Spray Chambers for HF

### Tracey PFA44

|               |             |
|---------------|-------------|
| 44mL Cyclonic | 20-809-3713 |
|---------------|-------------|



## Torches

### D-Torch

30-807-0540

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2847 |
| Quartz Outer Tube   | 31-808-2848 |
| Retaining Ring      | 31-808-2818 |



### D-Torch for HF

30-808-2937

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2847 |
| Ceramic Outer Tube  | 31-808-2849 |
| Retaining Ring      | 31-808-2818 |



#### D-Torch Options:

|                    |             |
|--------------------|-------------|
| Quartz Outer Tube  | 31-808-2848 |
| Ceramic Outer Tube | 31-808-2849 |



### Quartz Torch

|                              |             |
|------------------------------|-------------|
| Standard Quartz Torch        | 30-808-8107 |
| High Efficiency Quartz Torch | 31-808-2784 |



## Torches

### Quartz Injectors (non DRC)

Tapered Quartz Injector 1.0mm 31-808-0370

Tapered Quartz Injector 1.2mm 31-808-0789

Tapered Quartz Injector 1.5mm 31-807-0006

Tapered Quartz Injector 1.8mm 31-807-0005

Tapered Quartz Injector 2.0mm 31-807-0004

These injectors are compatible with both D-Torch and standard torch. They are suitable for torch adaptor 31-808-2825.



### Quartz Injectors (DRC Versions)

Tapered Quartz Injector with Ball Joint, 0.85mm 31-808-3125

Tapered Quartz Injector with Ball Joint, 1.5mm 31-808-0851

Tapered Quartz Injector with Ball Joint, 2.0mm 31-808-0806

Tapered Quartz Injector with Ball Joint, 2.5mm 31-808-3463

These injectors are compatible with both D-Torch and standard torch. They are suitable for torch adaptor 31-808-2824.



### HF Resistant Injectors

Tapered Alumina Injector 1.5mm 31-807-0044

Tapered Alumina Injector 1.8mm 31-807-0045

Tapered Alumina Injector 2.0mm 31-807-0060

Sapphire Injector 2.0mm 31-808-2803

Platinum Injector 2.0mm 31-808-2972

These injectors are compatible with both D-Torch and standard torch. They are suitable for torch adaptor 31-808-2825.



### Torch Adaptor

Cassette Mount Adaptor for Ball Joint Injector 31-808-2824

This adaptor is suitable for injectors with a ball joint.



### Torch Adaptor

PFA Cassette Mount Adaptor 31-808-2825

This adaptor is suitable for injectors without a ball joint.



## Cones

### Sampler Cones

Nickel Sampler PE3011-Ni



Aluminium Sampler PE3011-Al

Platinum Sampler PE3013-Pt



Platinum Sampler Boron free PE3013-Pt-BF

### Skimmer Cones

Nickel Skimmer PE3012-Ni



Aluminium Skimmer PE3012-Al

Platinum Skimmer PE3014-Pt



Platinum Skimmer Boron free PE3014-Pt-BF

Hyper Skimmer PE3015-Al



O-ring for NexION Hyper Skimmer Cone (pack of 5) PE5115

Screw for NexION Hyper Skimmer Cone (pack of 2) PE5116

### ConeGuard Thread Protectors

Sampler Cone Guard For NexION 300/350 70-803-1024



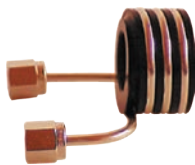
Skimmer Cone Guard For NexION 300/350 70-803-1026



Gasket for Sampler Cone PE5111

## RF Coils

Copper 70-900-2006C



RF Coil Installation Kit 70-900-2006T



## Common Accessories

### Elegra Argon Humidifier

Elegra Dual Two-channel Argon Humidifier 70-803-1274



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108

Fitting only connects to 1.3mm and 1.6mm Autosampler Tubing



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF solutions 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### Suitable for Cetac ASX-520

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

### Suitable for PE S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0816



## Glass DC Nebulizers

### SeaSpray

|                  |             |
|------------------|-------------|
| 2mL/min uptake   | A23-1-USS2  |
| 400µL/min uptake | A23-1-USS04 |

### MicroMist

|                  |             |
|------------------|-------------|
| 400µL/min uptake | A23-1-UM04  |
| 200µL/min uptake | A23-1-UM02  |
| 100µL/min uptake | A23-1-UM01  |
| 50µL/min uptake  | A23-1-UM005 |



## DC Nebulizers for HF

### OpalMist

|                  |              |
|------------------|--------------|
| 400µL/min uptake | A23-1-PFA04  |
| 200µL/min uptake | A23-1-PFA02  |
| 100µL/min uptake | A23-1-PFA01  |
| 50µL/min uptake  | A23-1-PFA005 |



## Cones

### Sampler Cones

|                                |              |
|--------------------------------|--------------|
| Nickel Sampler                 | PE3011-Ni    |
| Aluminium Sampler              | PE3011-Al    |
| Platinum Sampler               | PE3013-Pt    |
| Platinum Sampler<br>Boron Free | PE3013-Pt-BF |



### Skimmer Cones

|                                |              |
|--------------------------------|--------------|
| Nickel Skimmer                 | PE3012-Ni    |
| Aluminium Skimmer              | PE3012-Al    |
| Platinum Skimmer               | PE3014-Pt    |
| Platinum Skimmer<br>Boron Free | PE3014-Pt-BF |
| Hyper Skimmer                  | PE3015-Al    |



|                                                     |        |
|-----------------------------------------------------|--------|
| O-ring for NexION Hyper<br>Skimmer Cone (pack of 5) | PE5115 |
|-----------------------------------------------------|--------|

|                                                    |        |
|----------------------------------------------------|--------|
| Screw for NexION Hyper<br>Skimmer Cone (pack of 2) | PE5116 |
|----------------------------------------------------|--------|

### ConeGuard Thread Protectors

|                                            |             |
|--------------------------------------------|-------------|
| Sampler Cone Guard<br>For NexION 1000/2000 | 70-803-1024 |
|--------------------------------------------|-------------|

|                                            |             |
|--------------------------------------------|-------------|
| Skimmer Cone Guard<br>For NexION 1000/2000 | 70-803-1026 |
|--------------------------------------------|-------------|



|                            |        |
|----------------------------|--------|
| Gasket for<br>Sampler Cone | PE5111 |
|----------------------------|--------|

## Common Accessories

### Elegra Argon Humidifier

Elegra Dual Two-channel  
Argon Humidifier

70-803-1473



### Gaurdian In-Line Filters

Guardian in-line non-return  
gas filter

70-803-1362

Guardian in-line sample filter 70-803-1108

Fitting only connects to 1.3mm and 1.6mm  
Autosampler Tubing



### Trident Internal Standard Kit

Standard Kit

60-808-1185

Standard Kit for HF

60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### Suitable for Cetac ASX-520

Polyimide sheathed Autosampler Probe

0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe

0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe

0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe

1.0mm ID 70-803-0793

### Suitable for PE S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe

0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe

0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe

1.0mm ID 70-803-0816



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A21-07-USS2  |
| 400µL/min uptake | A21-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |



### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA2   |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



### VeeSpray

|                    |            |
|--------------------|------------|
| 0.6-3mL/min uptake | A21-07-CV6 |
|--------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1147-XR  |
| Quartz Spray Chamber | KT-1147Q-XR |
| PFA Spray Chamber    | KT-1147P-XR |



## Spray Chambers

### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0495HE |
|---------------|---------------|



### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-808-8882HE |
|---------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0164HE |
|---------------|---------------|



### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-0498HE |
|---------------|---------------|



## Spray Chambers for HF

### Twister TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-3452 |
|---------------|-------------|



### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-2507 |
|---------------|-------------|



## Torches

### D-Torch for Avio 200

D-Torch 30-808-3800



#### Comprises:

Base and Inner Tube 31-808-3802

Quartz Outer Tube 31-808-3792

Retaining Ring 31-808-2818

#### D-Torch Options:

Ceramic Outer Tube 31-808-3820



Injector Adapter 31-808-3782

### D-Torch for Avio 500

D-Torch 30-808-3882



#### Comprises:

Base and Inner Tube 31-808-3883

Quartz Outer Tube 31-808-3792

Retaining Ring 31-808-2818

#### D-Torch Options:

Ceramic Outer Tube 31-808-3894

Injector Adapter 31-808-3782



### Tapered Injectors for D-Torch

Quartz Injector 0.8mm 31-808-3785

Quartz Injector 1.2mm 31-808-3786

Quartz Injector 1.6mm 31-808-3788

Quartz Injector 2.0mm 31-808-3789

Quartz Injector 3.0mm 31-808-3790

Alumina Injector 1.25mm 31-808-3799



### Capillary Injectors for D-Torch

Quartz Injector 1.2mm 31-808-3787

Sapphire Injector 2.0mm 31-808-3784

### Fixed Torch for Avio 200/500

Quartz Torch with single slot 31-808-3776

## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1269



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108

Fitting only connects to 1.3mm and 1.6mm Autosampler Tubing



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### Suitable for Cetac ASX-520

Polyimide sheathed Autosampler Probe  
0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe  
0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0793

Suitable for PE S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe  
0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0816



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A21-07-USS2  |
| 400µL/min uptake | A21-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |



### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA2   |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A21-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1012-XR  |
| Quartz Spray Chamber | KT-1012Q-XR |
| PFA Spray Chamber    | KT-1012P-XR |



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0434HE |
|---------------|---------------|



### Twister

|                                            |               |
|--------------------------------------------|---------------|
| 50mL Cyclonic (Aqueous)<br>With 7mm baffle | 20-809-0208HE |
|--------------------------------------------|---------------|



### Twister

|                                             |               |
|---------------------------------------------|---------------|
| 50mL Cyclonic (Organics)<br>With 4mm baffle | 20-809-0446HE |
|---------------------------------------------|---------------|



### Twister

|                           |               |
|---------------------------|---------------|
| 50mL Cyclonic (Aux. Port) | 20-809-0004HE |
|---------------------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-9121HE |
|---------------|---------------|

### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-2120HE |
|---------------|---------------|

## Spray Chambers for HF

### Tracey TFE

|                                    |             |
|------------------------------------|-------------|
| 50mL Cyclonic                      | 20-809-2510 |
| Plugs directly into cassette mount |             |



## Torches

**D-Torch** 30-808-2926

**Comprises:**

Base and Inner Tube 31-808-2981  
 Quartz Outer Tube 31-808-2986  
 Retaining Ring 31-808-2818

**D-Torch Options:**

Ceramic Outer Tube 31-808-3365  
 Quartz Outer Tube (3 slots) 31-808-3436  
 Copper Foils (PKT 12) for Ceramic Outer Tube 31-808-3377

**Quartz Torches**

JAZ with single slot 30-808-0845  
 Short, without slot 30-808-0845S  
 Without slot 30-808-1122  
 With 3 slots 30-808-1470

**Quartz Torch Options:**

Copper Foils (PKT 12) for D-Torch Outer Tube and Quartz Torch 31-808-2645

**Tapered Injectors**

Quartz Injector 1.2mm 31-808-1154  
 Quartz Injector 2.0mm 31-807-0075  
 Quartz Injector 3.0mm 31-808-2506  
 Alumina Injector 2.0mm 31-808-1210  
 Alumina Injector 2.4mm 31-808-2771  
 Sapphire Injector 2.0mm 31-808-2774

**Capillary Injectors**

Quartz Injector 1.0mm 31-808-0939  
 Quartz Injector 1.8mm 31-808-0794

**Torch Bonnet** 31-800-0018

**Purge Windows**

Axial 17mm disk for 4000/5000 7000/8000DV 31-808-0551  
 Axial 32mm disk for 7000DV 31-808-2649  
 Radial for 5000/7000DV (Post Nov. 2004) 31-808-2788

## RF Coils

Silver 70-900-2003S  
 Gold 70-900-2003G

**RF Coil Installation Kit** 70-900-2003T

## Common Accessories

**Elegra Argon Humidifier**

Elegra Argon Humidifier 70-803-1269

**Gaurdian In-Line Filters**

Guardian in-line non-return gas filter 70-803-1362  
 Guardian in-line sample filter 70-803-1108  
 Fitting only connects to 1.3mm and 1.6mm Autosampler Tubing

**Trident Internal Standard Kit**

Standard Kit 60-808-1185  
 Standard Kit for HF solutions 60-808-1150

## Autosampler Probes

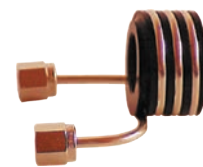
(See page 12 for complete list of probes)

**Suitable for Cetac ASX-520**

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L  
 PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784  
 PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443  
 PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

**Suitable for PE S10 or AS93+**

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID 70-803-1071  
 PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-1440  
 PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0816



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A21-07-USS2  |
| 400µL/min uptake | A21-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |



### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA2   |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A21-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1011-XR  |
| Quartz Spray Chamber | KT-1011Q-XR |
| PFA Spray Chamber    | KT-1011P-XR |



## Spray Chambers

### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0495HE |
|---------------|---------------|



## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-2507 |
|---------------|-------------|



## Torches

### D-Torch

30-808-2832

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2809 |
| Quartz Outer Tube   | 31-808-2821 |
| Retaining Ring      | 31-808-2818 |



#### D-Torch Options:

|                    |             |
|--------------------|-------------|
| Ceramic Outer Tube | 31-808-2815 |
|--------------------|-------------|



### Quartz Torch

|                          |             |
|--------------------------|-------------|
| With 3 slots             | 30-807-0064 |
| With 3 slots (Long life) | 30-808-3593 |



### Tapered Quartz Injectors

|                       |             |
|-----------------------|-------------|
| Quartz Injector 1.0mm | 31-808-0119 |
| Quartz Injector 1.5mm | 31-808-0124 |
| Quartz Injector 1.8mm | 31-807-0008 |
| Quartz Injector 2.0mm | 31-807-0050 |



### Tapered Alumina Injectors

|                        |             |
|------------------------|-------------|
| Alumina Injector 1.5mm | 31-807-0051 |
| Alumina Injector 1.8mm | 31-807-0052 |
| Alumina Injector 2.0mm | 31-808-1352 |



### Capillary Alumina Injectors

|                        |             |
|------------------------|-------------|
| Alumina Injector 2.0mm | 31-808-2625 |
|------------------------|-------------|



## Torches

**Torch Bonnet** 31-800-0018



**Purge Extension Window for 4300/5300/7300V** 31-808-1345



## RF Coils

Silver 70-900-2003S

Gold 70-900-2003G



**RF Coil Installation Kit** 70-900-2003T



## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1269



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108

Fitting only connects to 1.3mm and 1.6mm Autosampler Tubing



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF solutions 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### Suitable for Cetac ASX-520

Polyimide sheathed Autosampler Probe  
0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe  
0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0793

### Suitable for PE S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe  
0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0816



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A21-07-USS2  |
| 400µL/min uptake | A21-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |



### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA2   |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A21-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass spray chamber  | KT-1012-XR  |
| Quartz Spray Chamber | KT-1021Q-XR |
| PFA spray chamber    | KT-1012P-XR |



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-0434HE |
|---------------|---------------|



### Twister

|                                            |               |
|--------------------------------------------|---------------|
| 50mL Cyclonic (Aqueous)<br>With 7mm baffle | 20-809-0208HE |
|--------------------------------------------|---------------|



### Twister

|                                             |               |
|---------------------------------------------|---------------|
| 50mL Cyclonic (Organics)<br>With 4mm baffle | 20-809-0446HE |
|---------------------------------------------|---------------|



### Twister

|                           |               |
|---------------------------|---------------|
| 50mL Cyclonic (Aux. Port) | 20-809-0004HE |
|---------------------------|---------------|



### Cinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-9121HE |
|---------------|---------------|

### Twinnabar

|               |               |
|---------------|---------------|
| 20mL Cyclonic | 20-809-9120HE |
|---------------|---------------|

## Spray Chambers for HF

### Tracey TFE

|                                    |             |
|------------------------------------|-------------|
| 50mL Cyclonic                      | 20-809-2510 |
| Plugs directly into cassette mount |             |



## Torches

**D-Torch** 30-808-3300

### Comprises:

Base and Inner Tube 31-808-3292  
Quartz Outer Tube 31-808-3294  
Retaining Ring 31-808-2818



### D-Torch Options

Ceramic Outer Tube 31-808-2990  
Quartz Outer Tube (No Slot) 31-808-3407  
Copper Foils (PKT 12) for Ceramic Outer Tube 31-808-3356



### Quartz Torch

Without slots 31-808-3254  
With single slot 31-808-3255  
With 3 slots 31-808-3256

### Quartz Torch Options:

Copper Foil for Quartz Torch or D-Torch Quartz Outer Tube (pack of 12) 31-808-3289

### Tapered Quartz Injectors

Quartz Injector 0.8mm 31-808-3257  
Quartz Injector 2.0mm 31-808-3258  
Quartz Injector 2.5mm 31-808-3730  
Quartz Injector 3.0mm 31-808-3259  
Alumina Injector 1.2mm 31-808-3287  
Alumina Injector 2.0mm 31-808-3286



### Sapphire Injectors

Sapphire Injector 2mm 31-808-3528

### Purge Windows

Axial 17mm disk 31-808-0551  
Axial 32mm disk 31-808-2649  
Radial (Post Nov. 2004) 31-808-2788

## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1269



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108

Fitting only connects to 1.3mm and 1.6mm Autosampler Tubing



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF solutions 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### Suitable for Cetac ASX-520

Polyimide sheathed Autosampler Probe 0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe 0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0793

### Suitable for PE S10 or AS93+

PTFE Encapsulated Carbon Fibre Probe 0.25mm ID 70-803-1071

PTFE Encapsulated Carbon Fibre Probe 0.5mm ID 70-803-1440

PTFE Encapsulated Carbon Fibre Probe 1.0mm ID 70-803-0816



## Glass DC Nebulizers

### Conikal

1mL/min uptake      A41-1-UC1S

### SeaSpray

400μL/min uptake      A41-07-USS04

### Slurry

4mL/min uptake      A41-1-US6

### MicroMist

600μL/min uptake      A41-07-UM06S

200μL/min uptake      A41-07-UM02

100μL/min uptake      A41-07-UM01

50μL/min uptake      A41-07-UM005



## DC Nebulizers Compatible with HF

### OpalMist

1mL/min uptake      A41-1-PFA1S

400μL/min uptake      A41-07-PFA04

200μL/min uptake      A41-07-PFA02

100μL/min uptake      A41-07-PFA01

50μL/min uptake      A41-07-PFA005



### DuraMist

1mL/min uptake      A41-1-DM1S

400μL/min uptake      A41-07-DM04



### VeeSpray

0.6 - 3mL/min uptake      A41-1-CV6



## Spray Chambers

### Glass

50mL Cyclonic      21-809-3994

With B14 gravity drain



### Quartz

50mL Cyclonic      21-809-3992

With B14 gravity drain



### Drain Device

21-808-8214



### Extention Pipe

Glass Extention w/ right angle      31-808-3920

## Spray Chambers Compatible with HF

### PFA

50mL Cyclonic      21-809-3991



### HF Drain Device

21-809-2540



### Extention Pipe

PFA Extention w/ right angle      21-809-4081

## Torches

### Quartz Torches

|                                                         |             |
|---------------------------------------------------------|-------------|
| Quartz Mini Torch<br>(Suitable for ICP-MS 2030)         | 30-807-0567 |
| Torch with 1.2mm Injector<br>(Suitable for ICP-MS 8500) | 30-808-9986 |
| Torch with 1.5mm Injector<br>(Suitable for ICP-MS 8500) | 30-808-1090 |



## RF Coils

|        |              |
|--------|--------------|
| Copper | 70-900-6100C |
| Silver | 70-900-6100S |
| Gold   | 70-900-6100G |

### RF Coil Installation Kit

|                          |              |
|--------------------------|--------------|
| RF Coil Installation Kit | 70-900-6100T |
|--------------------------|--------------|

## Cones

### Sampler Cones

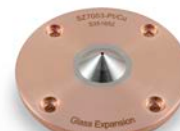
|                |           |
|----------------|-----------|
| Nickel Sampler | SZ7001-Ni |
|----------------|-----------|



|                |           |
|----------------|-----------|
| Copper Sampler | SZ7001-Cu |
|----------------|-----------|



|                  |              |
|------------------|--------------|
| Platinum Sampler | SZ7003-Pt/Cu |
|------------------|--------------|



### Skimmer Cones

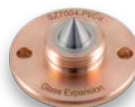
|                |           |
|----------------|-----------|
| Copper Skimmer | SZ7002-Cu |
|----------------|-----------|



|                |           |
|----------------|-----------|
| Nickel Skimmer | SZ7002-Ni |
|----------------|-----------|



|                  |              |
|------------------|--------------|
| Platinum Skimmer | SZ7004-Pt/Cu |
|------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                         |             |
|-------------------------|-------------|
| Elegra Argon Humidifier | 70-803-1312 |
|-------------------------|-------------|



### Gaurdian In-Line Filters

|                                           |             |
|-------------------------------------------|-------------|
| Guardian in-line non-return<br>gas filter | 70-803-1362 |
| Guardian in-line sample filter            | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Shimadzu ASC-6100F/9800

|                                                          |             |
|----------------------------------------------------------|-------------|
| PTFE Sheathed Carbon Fibre Probe<br>0.3mm ID with UniFit | 70-803-1200 |
|----------------------------------------------------------|-------------|

### For Shimadzu AS10

|                                                    |             |
|----------------------------------------------------|-------------|
| PTFE Coated Vitcon O-rings<br>(PKT 10) With UniFit | 70-803-1477 |
|----------------------------------------------------|-------------|

## Glass DC Nebulizers

### Conikal

1mL/min uptake      A41-1-UC1S

### SeaSpray

2mL/min uptake      A41-1-USS2S

### Slurry

4mL/min uptake      A41-1-US6

### MicroMist

600µL/min uptake      A41-07-UM06S

200µL/min uptake      A41-07-UM02

100µL/min uptake      A41-07-UM01

50µL/min uptake      A41-07-UM005



## DC Nebulizers for HF

### OpalMist

1mL/min uptake      A41-07-PFA1S

600µL/min uptake      A41-07-PFA06S

200µL/min uptake      A41-07-PFA02

100µL/min uptake      A41-07-PFA01

50µL/min uptake      A41-07-PFA005



### DuraMist

1mL/min uptake      A41-07-DM1S

400µL/min uptake      A41-07-DM04



### VeeSpray

0.6 - 3mL/min uptake      A41-1-CV6



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

Glass spray chamber      KT-1067-XR

Quartz spray chamber      KT-1067Q-XR

PFA spray chamber      KT-1067P-XR



## Spray Chambers

### Tracey

50mL Cyclonic      20-808-8881HE

With B14 gravity drain



### Twister

50mL Cyclonic      20-809-9119HE

With B14 gravity drain



### Twister

50mL Cyclonic      20-809-0222HE



### Cinnabar

20mL Cyclonic      20-809-0164HE



### Drain Device

21-808-8214



### Transfer Tube, Spray Chamber to ICPE-9000/9800 Torch

Glass Transfer Tube 86mm      21-809-2846



## Autosampler Probes

(See page 12 for complete list of probes)

### For Shimadzu ASC-6100F/9800

PTFE Sheathed Carbon Fibre Probe  
0.3mm ID with UniFit      70-803-1200

### For Shimadzu AS10

PTFE Coated Vitcon O-rings  
(PKT 10) With UniFit      70-803-1477

## Spray Chambers for HF

### Tracey TFE

50mL Cyclonic 20-809-2508  
With B14 gravity drain  
Suitable for use with HF



### HF Drain Device

21-809-2540



### Mounting bracket for HF Spray Chamber

21-809-2839



### Transfer Tube, Spray Chamber to ICPE-9000/9800 Torch

PFA Transfer Tube 82.5mm 31-808-3071

## Torches

### Semi Demountable Torch (HF)

30-808-8039

Suitable for ICPS-7500/8100 and ICPE-9000/9800

#### Comprises:

Torch Body 31-808-1258  
Torch Adaptor 31-808-1260  
Tapered Alumina Injector 1.5mm 31-808-0013  
Joint Clip B14-Nickel KCM-14  
GazFit Connectors (PKT 4) for 4mm OD side arms GAZ-04



### Tapered Injectors

Alumina Injector 1.0mm 31-808-0835  
Alumina Injector 1.5mm 31-808-0013  
Alumina Injector 1.8mm 31-808-0015  
Alumina Injector 2.0mm 31-808-0027  
Alumina Injector 2.4mm 31-808-0385



## Torches

### Capillary Injectors

Sapphire Injector 2.0mm 31-808-3001

### Quartz Torches

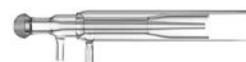
Quartz Torch Standard 1.5mm Injector (Suitable for 7500/8100) 30-808-1179

Quartz Torch for Organics, 1.0mm Injector (Suitable for 7500/8100/9000/9800) 30-807-0519

Quartz Torch for High TDS, 1.8mm Injector (Suitable for 7500/8100/9000/9800) 30-807-0518

Quartz Torch for High TDS, 2.0mm Injector (Suitable for 7500/8100/9000/9800) 30-807-0564

Quartz Mini Torch 1.5mm Injector (Suitable for ICPE-9000/9800) 30-807-0534



## RF Coils

Copper 70-900-6000C  
Silver 70-900-6000S  
Gold 70-900-6000G

RF Coil Installation Kit 70-900-6000T

## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1312



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362  
Guardian in-line sample filter 70-803-1108



### Trident Internal Standard Kit

Standard Kit 60-808-1185  
Standard Kit for HF 60-808-1150



## Glass DC Nebulizers

## SeaSpray

|                                |              |
|--------------------------------|--------------|
| 2mL/min uptake                 | A21-07-USS2  |
| 1mL/min uptake                 | A21-07-USS1  |
| 400µL/min uptake               | A21-07-USS04 |
| 2mL/min<br>with PEEK connector | A21-1-USS2   |

## MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |

## Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

## Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |



## DC Nebulizers for HF

## DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



## OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA02  |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



## VeeSpray

|                    |            |
|--------------------|------------|
| 0.6-3mL/min uptake | A21-07-CV6 |
|--------------------|------------|



## IsoMist XR

Programmable Temperature  
Cyclonic Spray Chamber

## For ARCOS II EOP

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1146-XR  |
| Quartz Spray Chamber | KT-1146Q-XR |
| PFA Spray Chamber    | KT-1146P-XR |

## For Blue TI/EOP

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1141-XR  |
| Quartz Spray Chamber | KT-1141Q-XR |
| PFA Spray Chamber    | KT-1141P-XR |



## Spray Chambers

## Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2665HE |
|---------------|---------------|



## Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2951HE |
|---------------|---------------|



## Scott Spray Chamber

20-809-4053

## Quartz Adaptor

21-809-3772

Quartz Adaptor  
with Aux Port

21-809-3771



## Spray Chambers for HF

## Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-3717 |
|---------------|-------------|

Suitable for use with HF.  
Requires Transfer Tube 21-809-3726.



## PuraFlex Transfer Tube 21-809-3726



## Torches

**D-Torch Blue EOP** 30-808-3600

**D-Torch Blue TI** 30-808-3629

### Comprises:

Base and Inner Tube 31-808-3605

Quartz Outer Tube 31-808-3630

Injector Ferrule 31-808-2962

Retaining Ring 31-808-3595

Adaptor for D-Torch B19 31-808-3651

Adaptor S19-B19-90deg 21-809-4045

Metal Ball Joint Clip JC-19

### D-Torch Options:

Sheath Gas Adaptor 21-809-4082

Aux Gas Line 70-803-1424



### Tapered Injectors for Blue EOP/TI D-Torch

Quartz Injector 1.0mm 31-808-0009

Quartz Injector 1.2mm 31-808-3643

Quartz Injector 1.5mm 31-808-0007

Quartz Injector 1.8mm 31-808-8146

Quartz Injector 2.0mm 31-808-0008

Quartz Injector 2.4mm 31-808-3541

Quartz Injector 2.5mm 31-808-3645

Alumina Injector 1.0mm 31-808-0835

Alumina Injector 1.5mm 31-808-0013

Alumina Injector 1.8mm 31-808-0015

Alumina Injector 2.0mm 31-808-0027

Alumina Injector 2.4mm 31-808-0385



### Capillary Injectors for Blue EOP/TI D-Torch

Alumina Injector 1.8mm 31-808-0087

**D-Torch ARCOS II EOP** 30-808-3657

### Comprises:

Base and Inner Tube 31-808-3660

Quartz Outer Tube 31-808-3658

Injector Ferrule 31-808-2962

Retaining Ring 31-808-3595

Adaptor for D-Torch B19 31-808-3651

Adaptor S19-B19-90deg 21-809-4045

Metal Ball Joint Clip JC-19

### D-Torch Options:

Sheath Gas Adaptor 21-809-4082

Adaptor S19-B13-90deg 21-809-4048

Adaptor assembly 21-809-4223



## Torches

### Tapered Injectors for ARCOS II EOP D-Torch

Quartz Injector 1.8mm 31-808-3663

Quartz Injector 2.0mm 31-808-3674

Quartz Injector 2.5mm 31-808-3676

Alumina Injector 2.0mm 31-808-3699

Alumina Injector 2.4mm 31-808-3700



### Capillary Injectors for ARCOS II EOP D-Torch

Sapphire Injector 2.0mm 31-808-3718

Sapphire Injector 2.4mm 31-808-3850

## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1271



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

Polyimide sheathed Autosampler Probe  
0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe  
0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0793



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A21-07-USS2  |
| 1mL/min uptake   | A21-07-USS1  |
| 400µL/min uptake | A21-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A21-07-UM06  |
| 200µL/min uptake | A21-07-UM02  |
| 100µL/min uptake | A21-07-UM01  |
| 50µL/min uptake  | A21-07-UM005 |



### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A21-07-US6 |
|----------------|------------|

### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A21-07-UC2 |
| 1mL/min uptake | A21-07-UC1 |

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A21-07-DM1  |
| 400µL/min uptake | A21-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A21-07-PFA02  |
| 600µL/min uptake | A21-07-PFA06  |
| 200µL/min uptake | A21-07-PFA02  |
| 100µL/min uptake | A21-07-PFA01  |
| 50µL/min uptake  | A21-07-PFA005 |



### VeeSpray

|                    |            |
|--------------------|------------|
| 0.6-3mL/min uptake | A21-07-CV6 |
|--------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

#### For ARCOS II SOP

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1154-XR  |
| Quartz Spray Chamber | KT-1154Q-XR |
| PFA Spray Chamber    | KT-1154P-XR |

#### For Blue SOP

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1141-XR  |
| Quartz Spray Chamber | KT-1141Q-XR |
| PFA Spray Chamber    | KT-1141P-XR |



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2665HE |
|---------------|---------------|



### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2951HE |
|---------------|---------------|



### Scott Spray Chamber

|             |
|-------------|
| 20-809-4053 |
|-------------|

### Straight Quartz Adaptor

|             |
|-------------|
| 21-809-3773 |
|-------------|



### Straight Quartz Adapter with Aux Port

|             |
|-------------|
| 21-809-3804 |
|-------------|

## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-3717 |
|---------------|-------------|

Suitable for use with HF.  
Requires Transfer Tube 21-809-3727.



### Straight HF Resistant Adaptor

|             |
|-------------|
| 21-809-3727 |
|-------------|

## Torches

**D-Torch** 30-808-3614

### Comprises:

|                         |               |
|-------------------------|---------------|
| Base and Inner Tube     | 31-808-3605   |
| Quartz Outer Tube       | 31-808-3611   |
| Injector Ferrule        | 31-808-2962   |
| Retaining Ring          | 31-808-3595   |
| Adaptor for D-Torch B19 | 31-808-3651   |
| Adaptor for D-Torch B13 | 31-808-3596   |
| Metal Ball Joint Clip   | JC-19         |
| Safety Gloves, Medium   | SAFEGLOVE-med |

### Options:

|                    |             |
|--------------------|-------------|
| Sheath Gas Adaptor | 21-809-4083 |
|--------------------|-------------|



### Tapered Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 1.0mm  | 31-808-0009 |
| Quartz Injector 1.2mm  | 31-808-3643 |
| Quartz Injector 1.5mm  | 31-808-0007 |
| Quartz Injector 1.8mm  | 31-808-8146 |
| Quartz Injector 2.0mm  | 31-808-0008 |
| Quartz Injector 2.4mm  | 31-808-3541 |
| Quartz Injector 2.5mm  | 31-808-3645 |
| Alumina Injector 1.0mm | 31-808-0835 |
| Alumina Injector 1.5mm | 31-808-0013 |
| Alumina Injector 1.8mm | 31-808-0015 |
| Alumina Injector 2.0mm | 31-808-0027 |
| Alumina Injector 2.4mm | 31-808-0385 |



### Capillary Injectors for D-Torch

|                        |             |
|------------------------|-------------|
| Alumina Injector 1.8mm | 31-808-0087 |
|------------------------|-------------|

**Spectro Torch** 31-808-3405



### Injectors for Quartz Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 1.2mm  | 31-808-3410 |
| Quartz Injector 1.8mm  | 31-808-3391 |
| Quartz Injector 2.0mm  | 31-808-3411 |
| Quartz Injector 3.0mm  | 31-808-3412 |
| Alumina Injector 1.8mm | 31-808-3409 |
| Alumina Injector 2.5mm | 31-808-3390 |



## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1271



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |                             |
|---------------------|-----------------------------|
| Standard Kit        | 60-808-1185                 |
| Standard Kit for HF | <a href="#">60-808-1150</a> |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A31-07-USS2  |
| 400µL/min uptake | A31-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A31-07-UM06  |
| 200µL/min uptake | A31-07-UM02  |
| 100µL/min uptake | A31-07-UM01  |
| 50µL/min uptake  | A31-07-UM005 |



### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A31-07-UC2 |
| 1mL/min uptake | A31-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A31-07-US6 |
|----------------|------------|

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A31-07-DM1  |
| 400µL/min uptake | A31-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A31-07-PFA2   |
| 600µL/min uptake | A31-07-PFA06  |
| 200µL/min uptake | A31-07-PFA02  |
| 100µL/min uptake | A31-07-PFA01  |
| 50µL/min uptake  | A31-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A31-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                      |             |
|----------------------|-------------|
| Glass Spray Chamber  | KT-1015-XR  |
| Quartz Spray Chamber | KT-1015Q-XR |
| PFA Spray Chamber    | KT-1015P-XR |



## Spray Chambers

### HydraMist Simultaneous Cold Vapor/ Pneumatic Nebulization Spray Chamber

|             |         |
|-------------|---------|
| Hydride Kit | KT-1156 |
|-------------|---------|

## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2665HE |
|---------------|---------------|



### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2951HE |
|---------------|---------------|



### Adaptor

|                             |             |
|-----------------------------|-------------|
| Right Angle With Ball Joint | 21-809-2761 |
|-----------------------------|-------------|



## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-3469 |
|---------------|-------------|



## Torches

### D-Torch

|             |
|-------------|
| 30-808-2844 |
|-------------|

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2932 |
| Quartz Outer Tube   | 31-808-2840 |
| Retaining Ring      | 31-808-2707 |
| Injector Adaptor    | 31-808-2895 |
| Injector Ferrule    | 31-808-2897 |



### D-Torch for HF

|             |
|-------------|
| 30-808-2862 |
|-------------|

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2932 |
| Ceramic Outer Tube  | 31-808-3834 |
| Optic Fibre 170mm   | 31-808-2933 |
| Optic Fibre 450mm   | 31-808-3117 |
| Retaining Ring      | 31-808-2707 |
| Injector Adaptor    | 31-808-2895 |
| Injector Ferrule    | 31-808-2897 |



## Torches

### D-Torch

#### D-Torch Options:

|                        |        |
|------------------------|--------|
| PTFE Coated            |        |
| Viton O-rings (PKT 10) | VT-007 |

### Ceramic Outer Tube and Optic Fibre for D-Torch

31-808-3079

#### Comprises:

|                    |             |
|--------------------|-------------|
| Ceramic Outer Tube | 31-808-3834 |
| Optic Fibre 170mm  | 31-808-2933 |
| Optic Fibre 450mm  | 31-808-3117 |



### Quartz Torch

|            |             |
|------------|-------------|
| EMT Design | 31-808-2811 |
|------------|-------------|



### Tapered Injectors for D-Torch & EMT Torch

|                       |             |
|-----------------------|-------------|
| Quartz Injector 1.0mm | 31-808-2833 |
| Quartz Injector 1.5mm | 31-808-2834 |



### Capillary Injectors for D-Torch & EMT Torch

|                         |             |
|-------------------------|-------------|
| Quartz Injector 2.0mm   | 31-808-2836 |
| Quartz Injector 2.5mm   | 31-808-3246 |
| Quartz Injector 3.0mm   | 31-808-3247 |
| Alumina Injector 1.0mm  | 31-808-3279 |
| Alumina Injector 2.0mm  | 31-808-2835 |
| Sapphire Injector 2.0mm | 31-808-2977 |



### Quartz Torch

|            |             |
|------------|-------------|
| Old Design | 31-808-2676 |
|------------|-------------|



### Tapered Injectors for Old Design Torch

|                        |             |
|------------------------|-------------|
| Quartz Injector 1.0mm  | 31-808-2719 |
| Quartz Injector 1.5mm  | 31-808-2702 |
| Alumina Injector 1.5mm | 31-808-2787 |



### Capillary Injectors for Old Design Torch

|                         |             |
|-------------------------|-------------|
| Quartz Injector 2.0mm   | 31-808-2675 |
| Alumina Injector 2.0mm  | 31-808-2786 |
| Sapphire Injector 2.0mm | 31-808-2804 |



|                             |             |
|-----------------------------|-------------|
| <b>Duo Periscope Window</b> | 31-808-2677 |
|-----------------------------|-------------|



|                      |             |
|----------------------|-------------|
| <b>Quartz Window</b> | 70-803-1116 |
|----------------------|-------------|



## RF Coils

### RF Coil for 6000

|                       |              |
|-----------------------|--------------|
| Silver, Teflon Coated | 70-900-4002S |
| Gold, Teflon Coated   | 70-900-4002G |



### RF Coil for 7000/6000 Mark II

|                       |              |
|-----------------------|--------------|
| Silver, Teflon Coated | 70-900-4005S |
| Gold, Teflon Coated   | 70-900-4005G |

|                                 |              |
|---------------------------------|--------------|
| <b>RF Coil Installation Kit</b> | 70-900-4002T |
|---------------------------------|--------------|



## Common Accessories

### Elegra Argon Humidifier

|                         |             |
|-------------------------|-------------|
| Elegra Argon Humidifier | 70-803-1303 |
|-------------------------|-------------|



### Gaurdian In-Line Filters

|                                        |             |
|----------------------------------------|-------------|
| Guardian in-line non-return gas filter | 70-803-1362 |
| Guardian in-line sample filter         | 70-803-1108 |



### Trident Internal Standard Kit

|                     |             |
|---------------------|-------------|
| Standard Kit        | 60-808-1185 |
| Standard Kit for HF | 60-808-1150 |



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

|                                      |              |
|--------------------------------------|--------------|
| Polyimide sheathed Autosampler Probe |              |
| 0.5mm ID                             | 60-808-1186L |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.5mm ID                             | 70-803-0784  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 0.75mm ID                            | 70-803-1443  |
| PTFE Encapsulated Carbon Fibre Probe |              |
| 1.0mm ID                             | 70-803-0793  |



## Glass DC Nebulizers

### SeaSpray

|                  |              |
|------------------|--------------|
| 2mL/min uptake   | A31-07-USS2  |
| 400µL/min uptake | A31-07-USS04 |

### MicroMist

|                  |              |
|------------------|--------------|
| 600µL/min uptake | A31-07-UM06  |
| 200µL/min uptake | A31-07-UM02  |
| 100µL/min uptake | A31-07-UM01  |
| 50µL/min uptake  | A31-07-UM005 |



### Conikal

|                |            |
|----------------|------------|
| 2mL/min uptake | A31-07-UC2 |
| 1mL/min uptake | A31-07-UC1 |

### Slurry

|                |            |
|----------------|------------|
| 4mL/min uptake | A31-07-US6 |
|----------------|------------|

## DC Nebulizers for HF

### DuraMist

|                  |             |
|------------------|-------------|
| 1mL/min uptake   | A31-07-DM1  |
| 400µL/min uptake | A31-07-DM04 |



### OpalMist

|                  |               |
|------------------|---------------|
| 2mL/min uptake   | A31-07-PFA2   |
| 600µL/min uptake | A31-07-PFA06  |
| 200µL/min uptake | A31-07-PFA02  |
| 100µL/min uptake | A31-07-PFA01  |
| 50µL/min uptake  | A31-07-PFA005 |



### VeeSpray

|                      |            |
|----------------------|------------|
| 0.6 - 3mL/min uptake | A31-07-CV6 |
|----------------------|------------|



## IsoMist XR

### Programmable Temperature Cyclonic Spray Chamber

|                         |             |
|-------------------------|-------------|
| Glass Spray chamber     | KT-1021-XR  |
| PFA spray chamber       | KT-1021P-XR |
| Twinnabar spray chamber | KT-1021T-XR |



## Spray Chambers

### Tracey

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2665HE |
|---------------|---------------|



### Twister

|               |               |
|---------------|---------------|
| 50mL Cyclonic | 20-809-2951HE |
|---------------|---------------|



### Straight Ball Joint Adaptor

21-809-2723



## Spray Chambers for HF

### Tracey TFE

|               |             |
|---------------|-------------|
| 50mL Cyclonic | 20-809-9198 |
|---------------|-------------|



## Torches

### D-Torch Demountable Torch

30-808-2877

#### Comprises:

|                     |             |
|---------------------|-------------|
| Base and Inner Tube | 31-808-2932 |
| Quartz Outer Tube   | 31-808-2878 |
| Retaining Ring      | 31-808-2707 |
| Injector Adaptor    | 31-808-2895 |
| Injector Ferrule    | 31-808-2897 |



#### D-Torch Options:

|                        |             |
|------------------------|-------------|
| Ceramic Outer Tube     | 31-808-3836 |
| PTFE Coated            |             |
| Viton O-rings (PKT 10) | VT-007      |



## Torches

### Quartz Torch

EMT Design 31-808-2810



### Tapered Injectors for D-Torch & EMT Torch

Quartz Injector 1.0mm 31-808-2833



Quartz Injector 1.5mm 31-808-2834

### Capillary Injectors for D-Torch & EMT Torch

Quartz Injector 2.0mm 31-808-2836

Alumina Injector 1.0mm 31-808-3279



Alumina Injector 2.0mm 31-808-2835

Sapphire Injector 2.0mm 31-808-2977



### Quartz Torch

Old Design 31-808-2692



### Tapered Injectors for Old Design Torch

Quartz Injector 1.0mm 31-808-2719



Quartz Injector 1.5mm 31-808-2702

Alumina Injector 1.5mm 31-808-2787

### Capillary Injectors for Old Design Torch

Quartz Injector 2.0mm 31-808-2675



Alumina Injector 2.0mm 31-808-2786

Sapphire Injector 2.0mm 31-808-2804

## RF Coils

### RF Coil for 6000 Mark I

Silver, Teflon Coated 70-900-4002S

Gold, Teflon Coated 70-900-4002G



### RF Coil for 7000/6000 Mark II

Silver, Teflon Coated 70-900-4005S

Gold, Teflon Coated 70-900-4005G

RF Coil Installation Kit 70-900-4002T



## Common Accessories

### Elegra Argon Humidifier

Elegra Argon Humidifier 70-803-1303



### Gaurdian In-Line Filters

Guardian in-line non-return gas filter 70-803-1362

Guardian in-line sample filter 70-803-1108



### Trident Internal Standard Kit

Standard Kit 60-808-1185

Standard Kit for HF 60-808-1150



## Autosampler Probes

(See page 12 for complete list of probes)

### For Cetac ASX-520

Polyimide sheathed Autosampler Probe  
0.5mm ID 60-808-1186L

PTFE Encapsulated Carbon Fibre Probe  
0.5mm ID 70-803-0784

PTFE Encapsulated Carbon Fibre Probe  
0.75mm ID 70-803-1443

PTFE Encapsulated Carbon Fibre Probe  
1.0mm ID 70-803-0793



## DC Nebulizer Gas Fitting Connectors

|                                    |             |
|------------------------------------|-------------|
| Agilent Vista/700-ES               | 70-803-0969 |
| Agilent MP-AES                     | 70-803-0969 |
| Agilent 4500/7500                  | 70-803-1086 |
| Agilent 7700/7800/7900/8800/8900   | 70-803-1105 |
| Agilent 5100/5110                  | 70-803-1105 |
| Horiba Jobin Yvon (All models)     | 70-803-0911 |
| Leeman (All models)                | 70-803-0969 |
| PerkinElmer Optima and Avio        | 70-803-1070 |
| PerkinElmer Elan/NexION 300/350    | 70-803-1049 |
| PerkinElmer NexION 1000/2000       | 70-803-1449 |
| Shimadzu 9000/9800                 | 70-803-1311 |
| Shimadzu 2030                      | 70-803-1311 |
| Spectro (All models)               | 70-803-1070 |
| Thermo iCAP 6000/7000/Q & X-Series | 70-803-1292 |
| Thermo Neptune                     | 70-803-1468 |
| Analytik Jena ICP-MS               | 70-803-0969 |

## LC Interface for Speciation Measurements

The high-pressure fitting kit is a quick and easy way to ensure a leak tight connection of 1/16" or 1.3mm OD sample capillary to a Glass Expansion concentric nebulizer such as the SeaSpray, Conikal, MicroMist, DuraMist or OpalMist nebulizers. If you need to make a leak tight seal to your nebulizer - whether it is to a HPLC for speciation or a high throughput switching valve use this kit.

|                                     |           |
|-------------------------------------|-----------|
| High Pressure nebulizer fitting kit | FT-16-8-X |
|-------------------------------------|-----------|

## EzyLok Kit for Nebulizer Gas Side Arm

|                                 |             |
|---------------------------------|-------------|
| EzyLok Kit                      | EL-1        |
| <b>Comprises:</b>               |             |
| EzyLok Connector for 4mm Tubing | QSM-4       |
| EzyLok 6mm Hose Adaptor         | 70-808-0735 |
| Hose Clip, 6mm                  | SNP-1       |



## Tubing Connector

|                        |           |
|------------------------|-----------|
| 1.3mm to 1/16 inch     | FT-16-1.3 |
| 1/16 inch to 1/16 inch | FT-16-1.6 |

## Sample Tube Connectors (PKT 10)

|                                         | UniFit P/N | EzyFit P/N |
|-----------------------------------------|------------|------------|
| 0.25mm ID x 1.27mm OD x 700mm long      | NFT-025    | EZT-025    |
| 0.25mm ID x 1.27mm OD x 2000mm long     | NFT2-025   | EZT2-025   |
| 0.50mm ID x 1.27mm OD x 700mm long      | NFT-050    | EZT-050    |
| 0.50mm ID x 1.27mm OD x 2000mm long     | NFT2-050   | EZT2-050   |
| 0.75mm ID x 1.27mm OD x 700mm long      | NFT-075    | EZT-075    |
| 0.75mm ID x 1.27mm OD x 2000mm long     | NFT2-075   | EZT2-075   |
| 0.75mm ID x 1.27mm OD x 1500mm long     | NFTS-075   | EZTS-075   |
| 0.07mm ID x 1/16" OD x 700mm long       | NFT-16-07  | EZT-16-07  |
| 0.13mm ID x 1/16" OD x 700mm long       | NFT-16-13  | EZT-16-13  |
| 0.18mm ID x 1/16" OD x 700mm long       | NFT-16-18  | EZT-16-18  |
| 0.25mm ID x 1/16" OD x 700mm long       | NFT-16-25  | EZT-16-25  |
| 0.25mm ID x 1/16" OD x 1500mm long      | NFTS-16-25 | EZTS-16-25 |
| 0.50mm ID x 1/16" OD x 700mm long       | NFT-16-50  | EZT-16-50  |
| 0.50mm ID x 1/16" OD x 1500mm long      | NFTS-16-50 | EZTS-16-50 |
| 0.75mm ID x 1/16" OD x 700mm long       | NFT-16-75  | EZT-16-75  |
| 0.75mm ID x 1/16" OD x 1500mm long      | NFTS-16-75 | EZTS-16-75 |
| Tefzel 0.5mm ID x 1.3mm OD x 700mm long | NFTFE-050  | EZTFE-050  |
| 0.3mm ID x 0.75mm OD x 700mm long       | NFT-0703   | EZT-0703   |

## Sample Tubing

|                                       |            |
|---------------------------------------|------------|
| 0.25mm ID x 1.27mm OD x 10m long      | STT-025    |
| 0.50mm ID x 1.27mm OD x 10m long      | STT-050    |
| 0.75mm ID x 1.27mm OD x 10m long      | STT-075    |
| 0.25mm ID x 1/16" OD x 10m long       | STT-16-25  |
| 0.50mm ID x 1/16" OD x 10m long       | STT-16-50  |
| 0.75mm ID x 1/16" OD x 10m long       | STT-16-75  |
| 1.0mm ID x 1/16" OD x 10m long        | STT-16-100 |
| 0.3mm ID x 0.75mm OD x 10m long       | STT-0703   |
| 0.13mm ID x 1.27mm OD x 10m long      | PFT-013    |
| 0.18mm ID x 1.27mm OD x 10m long      | PFT-018    |
| 0.07mm ID x 1/16" OD x 10m long       | PFT-16-07  |
| 0.13mm ID x 1/16" OD x 10m long       | PFT-16-13  |
| 0.18mm ID x 1/16" OD x 10m long       | PFT-16-18  |
| 1/8" ID x 1/4" OD x 1m long           | 1/4PFA-HW  |
| Tefzel 0.5mm ID x 1.3mm OD x 10m long | TFE-050    |

## Other Tubing

|                                                                                                        |             |
|--------------------------------------------------------------------------------------------------------|-------------|
| Sample tubing 0.25mm ID x 1.27mm OD x 700mm long, for 0.05 and 0.1ml/min OpalMist and PolyCon (PKT 10) | 70-808-0360 |
| Reagent tube 1.6mm OD x 1.0mm ID x 1400mm long with PTFE Sinkers (PKT. 3)                              | 70-808-0360 |
| Tygon Tubing 1/4 inch x 1m                                                                             | 70-808-0360 |
| Tygon Tubing 700mm                                                                                     | 70-803-0598 |

## Helix & Helix CT Spray Chambers

### Helix CT:

|                                  |             |
|----------------------------------|-------------|
| Helix CT Locking Screw with Seal | 70-803-1439 |
| Helix CT Seal (PKT 4)            | 70-803-1456 |

### Helix:

|                     |             |
|---------------------|-------------|
| Helix Locking Screw | 70-100-0152 |
| Helix Seal (PKT 4)  | 70-100-0237 |
| Nebulizer Spacer    | 21-100-0246 |



## O-Rings Spray Chambers

|                                                                                 |             |
|---------------------------------------------------------------------------------|-------------|
| O-ring set for Large Adaptor (Tracey, Twister)                                  | 70-808-0501 |
| O-ring set for Small Adaptor (Cinnabar, Twinnabar)                              | 21-808-0818 |
| Teflon coated Viton O-Rings for spray chamber, nebulizer seal (PKT 10)          | VT-009      |
| Teflon coated Viton O-Rings for spray chamber, 12mm small adaptor seal (PKT 5)  | VT-9/1.5    |
| Teflon coated Viton O-Rings for spray chamber, 16mm large adaptor seal (PKT 10) | VT-10/2     |
| Silicon o-rings for spray chamber, nebulizer seal (PKT 10)                      | S-009       |

## GazFit Connectors for Torches

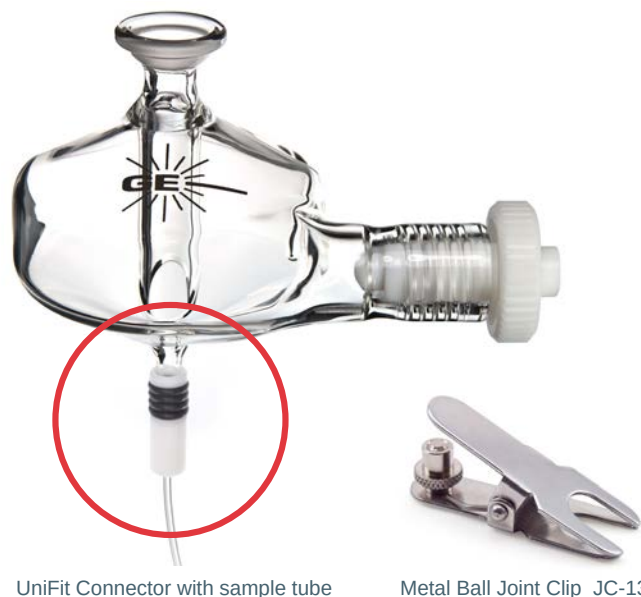
|                                                                                       |          |
|---------------------------------------------------------------------------------------|----------|
| GazFit Connectors (PKT 2), for 8mm OD arm                                             | GAZ-08   |
| GazFit Connectors (PKT 4), for 6mm OD torch side arms                                 | GAZ-06   |
| GazFit Connectors (PKT 4), 2 for 6mm OD torch side arms, 2 for 4mm OD torch side arms | GAZ-0604 |
| GazFit Connectors (PKT 4), for 5mm OD torch side arms                                 | GAZ-05   |
| GazFit Connectors (PKT 4), for 4mm OD torch side arms                                 | GAZ-04   |

GazFit connectors are only suitable for torches with tolerances of no more than +/- 0.15mm on the diameter of the side arms.

All Glass Expansion torches meet this specification.

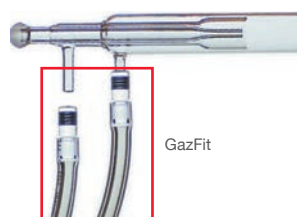
## Clips & Connectors for Spray Chambers

|                                                                                 |           |
|---------------------------------------------------------------------------------|-----------|
| Metal Ball Joint Clip<br>(to connect spray chamber and torch)                   | JC-13     |
| Nickel Joint Clip B14<br>(to connect spray chamber and drain adaptors)          | KCM-14    |
| Nickel Joint Clip KCM29<br>(to connect spray chamber and drain adaptors)        | KCM-29    |
| UniFit Connector with sample tube,<br>0.75mm ID x 1/16" OD x 700mm long (PKT 3) | UFT-16-75 |
| UniFit Connector with sample tube,<br>0.75mm ID x 1.3mm OD x 700mm long (PKT 3) | UFT-075   |
| UniFit Connector with sample tube,<br>0.86mm ID x 2mm OD x 480mm long (PKT 3)   | UFT-2-86  |
| UniFit Connector with sample tube,<br>0.86mm ID x 2mm OD x 700mm long (PKT 3)   | UFT-2-700 |



## O-Rings for Torches

|                                                                    |          |
|--------------------------------------------------------------------|----------|
| Viton O-Rings for demountable torch ball joint connectors (PKT 10) | 70-V-011 |
|--------------------------------------------------------------------|----------|



## PVC Peristaltic Pump Tubing

All tubes made from Tygon R3603/R3607 or equivalent. Supplied in packs of 12 tubes.

### Special Properties:

- Inexpensive all-round tubing for general laboratory applications.

### Advantages:

- Resistant to almost all inorganic materials.
- Does not age.
- Low gas permeability.
- Smooth inner surface.

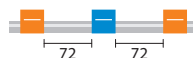
### Limitations:

- Potential leaching of plasticizers.



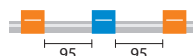
**PVC, 2 Bridged, 152mm**  
(152mm between tags)

| Tag Colours   | ID (mm) | P/N       |
|---------------|---------|-----------|
| orange/black  | 0.13    | 0.13-OBLK |
| orange/red    | 0.19    | 0.19-OR   |
| orange/blue   | 0.25    | 0.25-OB   |
| orange/green  | 0.38    | 0.38-OG   |
| green/yellow  | 0.44    | 0.44-GY   |
| orange/yellow | 0.51    | 0.51-OY   |
| white/yellow  | 0.57    | 0.57-WY   |
| orange/white  | 0.64    | 0.64-OW   |
| black/black   | 0.76    | 0.76-BLK  |
| orange/orange | 0.89    | 0.89-ORG  |
| white/black   | 0.95    | 0.95-WBLK |
| white/white   | 1.02    | 1.02-WHT  |
| white/red     | 1.09    | 1.09-WR   |
| red/red       | 1.14    | 1.14-RED  |
| red/grey      | 1.22    | 1.22-RGRY |
| grey/grey     | 1.30    | 1.30-GRY  |
| yellow/yellow | 1.42    | 1.42-YLW  |
| yellow/blue   | 1.52    | 1.52-YB   |
| blue/blue     | 1.65    | 1.65-BLU  |
| blue/green    | 1.75    | 1.75-BG   |
| green/green   | 1.85    | 1.85-GRN  |
| purple/purple | 2.06    | 2.06-PUR  |
| purple/black  | 2.29    | 2.29-PBLK |
| purple/orange | 2.54    | 2.54-PO   |
| purple/white  | 2.79    | 2.79-PW   |
| black/white   | 3.17    | 3.17-BLKW |



**PVC, 3 Bridged, 72mm**  
(72mm between tags)

| Tag Colours   | ID (mm) | P/N         |
|---------------|---------|-------------|
| orange/black  | 0.13    | 0.13-OBLK3B |
| orange/red    | 0.19    | 0.19-OR3B   |
| orange/blue   | 0.25    | 0.25-OB3B   |
| orange/green  | 0.38    | 0.38-OG3B   |
| green/yellow  | 0.44    | 0.44-GY3B   |
| orange/yellow | 0.51    | 0.51-OY3B   |
| white/yellow  | 0.57    | 0.57-WY3B   |
| orange/white  | 0.64    | 0.64-OW3B   |
| black/black   | 0.76    | 0.76-BLK3B  |
| orange/orange | 0.89    | 0.89-ORG3B  |
| white/black   | 0.95    | 0.95-WBLK3B |
| white/white   | 1.02    | 1.02-WHT3B  |
| white/red     | 1.09    | 1.09-WR3B   |
| red/red       | 1.14    | 1.14-RED3B  |
| red/grey      | 1.22    | 1.22-RGRY3B |
| grey/grey     | 1.30    | 1.30-GRY3B  |
| yellow/yellow | 1.42    | 1.42-YLW3B  |
| yellow/blue   | 1.52    | 1.52-YB3B   |
| blue/blue     | 1.65    | 1.65-BLU3B  |
| green/green   | 1.85    | 1.85-GRN3B  |
| purple/purple | 2.06    | 2.06-PUR3B  |
| purple/black  | 2.29    | 2.29-PBLK3B |
| purple/orange | 2.54    | 2.54-PO3B   |
| purple/white  | 2.79    | 2.79-PW3B   |
| black/white   | 3.17    | 3.17-BLKW3B |



**PVC, 3 Bridged, 95mm**  
(95mm between tags)

| Tag Colours   | ID (mm) | P/N           |
|---------------|---------|---------------|
| orange/blue   | 0.25    | 0.25-OB3B-95  |
| orange/green  | 0.38    | 0.38-OG3B-95  |
| orange/yellow | 0.51    | 0.51-OY3B-95  |
| orange/white  | 0.64    | 0.64-OW3B-95  |
| black/black   | 0.76    | 0.76-BLK3B-95 |
| orange/orange | 0.89    | 0.89-ORG3B-95 |
| white/white   | 1.02    | 1.02-WHT3B-95 |
| grey/grey     | 1.30    | 1.30-GRY3B-95 |
| yellow/blue   | 1.52    | 1.52-YB3B-95  |
| green/green   | 1.85    | 1.85-GRN3B-95 |
| purple/white  | 2.79    | 2.79-PW3B-95  |

## Solva Peristaltic Pump Tubing

All tubes made from Tygon 4040 or equivalent. Supplied in packs of 12 tubes.

### Special Properties:

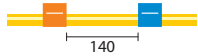
- Special tubing for hydrocarbons, petroleum products and distillates.

### Advantages:

- Specially formulated to transport hydrocarbons, petroleum products and distillates.
- Ideal for gasoline, kerosene, heating oils, cutting liquids and coolants based on glycols.
- Low gas permeability.

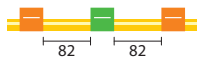
### Limitations:

- Not recommended for strong acids and alkalis, foodstuffs, beverages and medicines.
- Potential leaching of plasticizers.



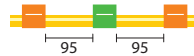
### Solva, 2 Bridged, 140mm (140mm between tags)

| Tag Colours   | ID (mm) | P/N          |
|---------------|---------|--------------|
| orange/blue   | 0.25    | 0.25-OB-SF   |
| orange/green  | 0.38    | 0.38-OG-SF   |
| orange/yellow | 0.51    | 0.51-OY-SF   |
| orange/white  | 0.64    | 0.64-OW-SF   |
| black/black   | 0.76    | 0.76-BLK-SF  |
| orange/orange | 0.89    | 0.89-ORG-SF  |
| white/white   | 1.02    | 1.02-WHT-SF  |
| red/red       | 1.14    | 1.14-RED-SF  |
| grey/grey     | 1.30    | 1.30-GRY-SF  |
| yellow/yellow | 1.42    | 1.42-YLW-SF  |
| yellow/blue   | 1.52    | 1.52-YB-SF   |
| blue/blue     | 1.65    | 1.65-BLU-SF  |
| green/green   | 1.85    | 1.85-GRN-SF  |
| purple/purple | 2.06    | 2.06-PUR-SF  |
| purple/black  | 2.29    | 2.29-PBLK-SF |
| purple/orange | 2.54    | 2.54-PO-SF   |
| purple/white  | 2.79    | 2.79-PW-SF   |



### Solva, 3 Bridged, 82mm (82mm between tags)

| Tag Colours   | ID (mm) | P/N           |
|---------------|---------|---------------|
| orange/green  | 0.38    | 0.38-OG3B-SF  |
| black/black   | 0.76    | 0.76-BLK3B-SF |
| orange/orange | 0.89    | 0.89-ORG3B-SF |
| red/red       | 1.14    | 1.14-RED3B-SF |
| grey/grey     | 1.30    | 1.30-GRY3B-SF |



### Solva, 3 Bridged, 95mm (95mm between tags)

| Tag Colours   | ID (mm) | P/N              |
|---------------|---------|------------------|
| orange/green  | 0.38    | 0.38-OG3B-95-SF  |
| orange/yellow | 0.51    | 0.51-OY3B-95-SF  |
| black/black   | 0.76    | 0.76-BLK3B-95-SF |
| orange/orange | 0.89    | 0.89-ORG3B-95-SF |
| white/white   | 1.02    | 1.02-WHT3B-95-SF |
| yellow/blue   | 1.52    | 1.52-YB3B-95-SF  |

## Viton® Peristaltic Pump Tubing

All tubes made from Fluran HC F-5500-A or equivalent.

### Special Properties:

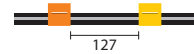
- Special tubing for concentrated acids and corrosive solvents.

### Advantages:

- High chemical resistance.
- Low gas permeability.
- Wide temperature range.

### Limitations:

- Limited service life.



### Viton®, 2 Bridged, 127mm (127mm between tags)

| Tag Colours   | ID (mm) | P/N         |
|---------------|---------|-------------|
| orange/yellow | 0.51    | VS0.51-OY   |
| orange/white  | 0.64    | VS0.64-OW   |
| black/black   | 0.76    | VS0.76-BLK  |
| orange/orange | 0.89    | VS0.89-ORG  |
| white/white   | 1.02    | VS1.02-WHT  |
| red/red       | 1.14    | VS1.14-RED  |
| grey/grey     | 1.30    | VS1.30-GRY  |
| yellow/yellow | 1.42    | VS1.42-YLW  |
| yellow/blue   | 1.52    | VS1.52-YB   |
| blue/blue     | 1.65    | VS1.65-BLU  |
| green/green   | 1.85    | VS1.85-GRN  |
| purple/purple | 2.06    | VS2.06-PUR  |
| purple/black  | 2.29    | VS2.29-PBLK |
| purple/orange | 2.54    | VS2.54-PO   |
| purple/white  | 2.79    | VS2.79-PW   |

Supplied in packs of 12 tubes

Tygon® MH Peristaltic Pump Tubing

All tubes made from Tygon MHSL 2001.

Special Properties:

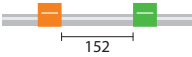
- Environmental-friendly tubing especially designed for solvents.
- Suitable for MIBK.

Advantages:

- High chemical resistance.
- Low gas permeability.
- Wide temperature range.

Limitations:

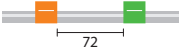
- Limited service life.



Tygon® MH , 2 Bridged, 152mm  
(152mm between tags)

| Tag Colours                                                                      |               | ID (mm) | P/N         |
|----------------------------------------------------------------------------------|---------------|---------|-------------|
|  | orange/green  | 0.38    | 0.38-ORG-MH |
|                                                                                  | orange/white  | 0.64    | 0.64-OW-MH  |
|                                                                                  | white/white   | 1.02    | 1.02-WHT-MH |
|  | yellow/blue   | 1.52    | 1.52-YB-MH  |
|  | purple/purple | 2.06    | 2.06-PUR-MH |
|                                                                                  | purple/white  | 2.79    | 2.79-PW-MH  |

Supplied in packs of 6 tubes



Tygon® MH , 2 Bridged, 72mm  
(72mm between tags)

| Tag Colours                                                                        |               | ID (mm) | P/N          |
|------------------------------------------------------------------------------------|---------------|---------|--------------|
|  | orange/green  | 0.38    | 0.38-ORG-MH3 |
|                                                                                    | orange/white  | 0.64    | 0.64-OW-MH3  |
|                                                                                    | white/white   | 1.02    | 1.02-WHT-MH3 |
|  | yellow/blue   | 1.52    | 1.52-YB-MH3  |
|  | purple/purple | 2.06    | 2.06-PUR-MH3 |
|                                                                                    | purple/white  | 2.79    | 2.79-PW-MH3  |

Supplied in packs of 6 tubes

It can be quite difficult to insert the sample tubing into the peristaltic pump tubes. This is particularly so for pump tubing with a small ID. To facilitate this connection, Glass Expansion supplies Contour flared-end pump tubing. The flared end of this pump tubing allows the larger capillary tubing to be inserted into the smaller pump tubing.

Any of the pump tubing that we normally supply can be supplied with flared end. Simply add "-F" to the end of the part number (eg. 0.38-OG-F). The flared-end tubing is supplied in packs of 6.

## Contour Flared-end PVC Peristaltic Pump Tubing

All tubes made from Tygon R3603/R3607 or equivalent. Supplied in packs of 6 tubes.

### Special Properties:

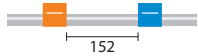
- Inexpensive all-round tubing for general laboratory applications.

### Advantages:

- Transparent.
- Resistant to almost all inorganic materials.
- Does not age.
- Low gas permeability.
- Smooth inner surface.

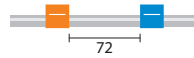
### Limitations:

- Potential leaching of plasticizers.



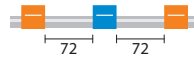
**PVC, 2 Bridged, 152mm**  
(152mm between tags)

| Tag Colours | ID (mm) | P/N         |
|-------------|---------|-------------|
|             | 0.13    | 0.13-OBLK-F |
|             | 0.19    | 0.19-OR-F   |
|             | 0.25    | 0.25-OB-F   |
|             | 0.38    | 0.38-OG-F   |
|             | 0.44    | 0.44-GY-F   |
|             | 0.51    | 0.51-OY-F   |
|             | 0.57    | 0.57-WY-F   |
|             | 0.64    | 0.64-OW-F   |
|             | 0.76    | 0.76-BLK-F  |
|             | 0.89    | 0.89-ORG-F  |
|             | 0.95    | 0.95-WBLK-F |
|             | 1.02    | 1.02-WHT-F  |
|             | 1.09    | 1.09-WR-F   |
|             | 1.14    | 1.14-RED-F  |
|             | 1.22    | 1.22-RGRY-F |
|             | 1.30    | 1.30-GRY-F  |
|             | 1.42    | 1.42-YLW-F  |
|             | 1.52    | 1.52-YB-F   |
|             | 1.65    | 1.65-BLU-F  |
|             | 1.75    | 1.75-BG-F   |
|             | 1.85    | 1.85-GRN-F  |
|             | 2.06    | 2.06-PUR-F  |
|             | 2.29    | 2.29-PBLK-F |
|             | 2.54    | 2.54-PO-F   |
|             | 2.79    | 2.79-PW-F   |
|             | 3.17    | 3.17-BLKW-F |



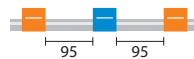
**PVC, 2 Bridged, 72mm**  
(72mm between tags)

| Tag Colours | ID (mm) | P/N          |
|-------------|---------|--------------|
|             | 0.19    | 0.19-OR-F-S  |
|             | 0.25    | 0.25-OB-F-S  |
|             | 0.76    | 0.76-BLK-F-S |
|             | 0.89    | 0.89-ORG-F-S |



**PVC, 3 Bridged, 72mm**  
(72mm between tags)

| Tag Colours | ID (mm) | P/N           |
|-------------|---------|---------------|
|             | 0.13    | 0.13-OBLK3B-F |
|             | 0.19    | 0.19-OR3B-F   |
|             | 0.25    | 0.25-OB3B-F   |
|             | 0.38    | 0.38-OG3B-F   |
|             | 0.44    | 0.44-GY3B-F   |
|             | 0.51    | 0.51-OY3B-F   |
|             | 0.57    | 0.57-WY3B-F   |
|             | 0.64    | 0.64-OW3B-F   |
|             | 0.76    | 0.76-BLK3B-F  |
|             | 0.89    | 0.89-ORG3B-F  |
|             | 0.95    | 0.95-WBLK3B-F |
|             | 1.02    | 1.02-WHT3B-F  |
|             | 1.09    | 1.09-WR3B-F   |
|             | 1.14    | 1.14-RED3B-F  |
|             | 1.22    | 1.22-RGRY3B-F |
|             | 1.30    | 1.30-GRY3B-F  |
|             | 1.42    | 1.42-YLW3B-F  |
|             | 1.52    | 1.52-YB3B-F   |
|             | 1.65    | 1.65-BLU3B-F  |
|             | 1.85    | 1.85-GRN3B-F  |
|             | 2.06    | 2.06-PUR3B-F  |
|             | 2.29    | 2.29-PBLK3B-F |
|             | 2.54    | 2.54-PO3B-F   |
|             | 2.79    | 2.79-PW3B-F   |
|             | 3.17    | 3.17-BLKW3B-F |



**PVC, 3 Bridged, 95mm**  
(95mm between tags)

| Tag Colours | ID (mm) | P/N             |
|-------------|---------|-----------------|
|             | 0.25    | 0.25-OB3B-95-F  |
|             | 0.38    | 0.38-OG3B-95-F  |
|             | 0.51    | 0.51-OY3B-95-F  |
|             | 0.76    | 0.76-BLK3B-95-F |
|             | 0.89    | 0.89-ORG3B-95-F |
|             | 1.02    | 1.02-WHT3B-95-F |
|             | 1.30    | 1.30-GRY3B-95-F |
|             | 1.52    | 1.52-YB3B-95-F  |
|             | 1.85    | 1.85-GRN3B-95-F |
|             | 2.79    | 2.79-PW3B-95-F  |

Contour Flared-end Solva  
Peristaltic Pump Tubing

All tubes made from Tygon 4040 or equivalent. Supplied in packs of 6 tubes.

Special Properties:

- Special tubing for hydrocarbons, petroleum products and distillates.

Advantages:

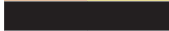
- Specially formulated to transport hydrocarbons, petroleum products and distillates.
- Ideal for gasoline, kerosene, heating oils, cutting liquids and coolants based on glycols.
- Low gas permeability.

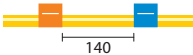
Limitations:

- Not recommended for strong acids and alkalies, foodstuffs, beverages and medicines.
- Potential leaching of plasticizers.



Solva, 3 Bridged, 95mm  
(95mm between tags)

|                                                                                   | Tag Colours   | ID (mm) | P/N                |
|-----------------------------------------------------------------------------------|---------------|---------|--------------------|
|  | orange/green  | 0.38    | 0.38-OG3B-95-SF-F  |
|  | orange/yellow | 0.51    | 0.51-OY3B-95-SF-F  |
|  | black/black   | 0.76    | 0.76-BLK3B-95-SF-F |
|  | orange/orange | 0.89    | 0.89-ORG3B-95-SF-F |
|  | white/white   | 1.02    | 1.02-WHT3B-95-SF-F |
|  | yellow/blue   | 1.52    | 1.52-YB3B-95-SF-F  |



Solva, 2 Bridged, 140mm  
(140mm between tags)

|                                                                                    | Tag Colours   | ID (mm) | P/N            |
|------------------------------------------------------------------------------------|---------------|---------|----------------|
|    | orange/blue   | 0.25    | 0.25-OB-SF-F   |
|    | orange/green  | 0.38    | 0.38-OG-SF-F   |
|    | orange/yellow | 0.51    | 0.51-OY-SF-F   |
|    | orange/white  | 0.64    | 0.64-OW-SF-F   |
|    | black/black   | 0.76    | 0.76-BLK-SF-F  |
|    | orange/orange | 0.89    | 0.89-ORG-SF-F  |
|   | white/white   | 1.02    | 1.02-WHT-SF-F  |
|  | red/red       | 1.14    | 1.14-RED-SF-F  |
|  | grey/grey     | 1.30    | 1.30-GRY-SF-F  |
|  | yellow/yellow | 1.42    | 1.42-YLW-SF-F  |
|  | yellow/blue   | 1.52    | 1.52-YB-SF-F   |
|  | blue/blue     | 1.65    | 1.65-BLU-SF-F  |
|  | green/green   | 1.85    | 1.85-GRN-SF-F  |
|  | purple/purple | 2.06    | 2.06-PUR-SF-F  |
|  | purple/black  | 2.29    | 2.29-PBLK-SF-F |
|  | purple/orange | 2.54    | 2.54-PO-SF-F   |
|  | purple/white  | 2.79    | 2.79-PW-SF-F   |



Solva, 3 Bridged, 82mm  
(82mm between tags)

|                                                                                    | Tag Colours   | ID (mm) | P/N             |
|------------------------------------------------------------------------------------|---------------|---------|-----------------|
|  | orange/green  | 0.38    | 0.38-OG3B-SF-F  |
|  | black/black   | 0.76    | 0.76-BLK3B-SF-F |
|  | orange/orange | 0.89    | 0.89-ORG3B-SF-F |
|  | red/red       | 1.14    | 1.14-RED3B-SF-F |
|  | grey/grey     | 1.30    | 1.30-GRY3B-SF-F |

## Contour Flared-end Viton® Peristaltic Pump Tubing

All tubes made from Fluran HC F-5500-A or equivalent.

### Special Properties:

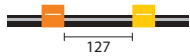
- Special tubing for concentrated acids and corrosive solvents.

### Advantages:

- High chemical resistance.
- Low gas permeability.
- Wide temperature range.

### Limitations:

- Limited service life.



**Viton®, 2 Bridged, 127mm**  
(127mm between tags)

| Tag Colours | ID (mm) | P/N           |
|-------------|---------|---------------|
|             | 0.51    | VS0.51-OY-F   |
|             | 0.64    | VS0.64-OW-F   |
|             | 0.76    | VS0.76-BLK-F  |
|             | 0.89    | VS0.89-ORG-F  |
|             | 1.02    | VS1.02-WHT-F  |
|             | 1.14    | VS1.14-RED-F  |
|             | 1.30    | VS1.30-GRY-F  |
|             | 1.42    | VS1.42-YLW-F  |
|             | 1.52    | VS1.52-YB-F   |
|             | 1.65    | VS1.65-BLU-F  |
|             | 1.85    | VS1.85-GRN-F  |
|             | 2.06    | VS2.06-PUR-F  |
|             | 2.29    | VS2.29-PBLK-F |
|             | 2.54    | VS2.54-PO-F   |
|             | 2.79    | VS2.79-PW-F   |

Supplied in packs of 6 tubes

## Contour Flared-end Tygon® MH Peristaltic Pump Tubing

All tubes made from Tygon MHSL 2001.

### Special Properties

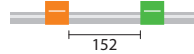
- Environmental-friendly tubing especially designed for solvents.
- Suitable for MIBK.

### Advantages:

- High chemical resistance.
- Low gas permeability.
- Wide temperature range.

### Limitations:

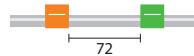
- Limited service life.



**Tygon® MH, 2 Bridged, 152mm**  
(152mm between tags)

| Tag Colours | ID (mm) | P/N           |
|-------------|---------|---------------|
|             | 0.38    | 0.38-ORG-MH-F |
|             | 0.64    | 0.64-OW-MH-F  |
|             | 1.02    | 1.02-WHT-MH-F |
|             | 1.52    | 1.52-YB-MH-F  |
|             | 2.06    | 2.06-PUR-MH-F |
|             | 2.79    | 2.79-PW-MH-F  |

Supplied in packs of 6 tubes



**Tygon® MH, 2 Bridged, 72mm**  
(72mm between tags)

| Tag Colours | ID (mm) | P/N            |
|-------------|---------|----------------|
|             | 0.38    | 0.38-ORG-MH3-F |
|             | 0.64    | 0.64-OW-MH3-F  |
|             | 1.02    | 1.02-WHT-MH3-F |
|             | 1.52    | 1.52-YB-MH3-F  |
|             | 2.06    | 2.06-PUR-MH3-F |
|             | 2.79    | 2.79-PW-MH3-F  |

Supplied in packs of 6 tubes







**GLASS EXPANSION**

Quality By Design

## **International**

6 Central Boulevard  
Port Melbourne  
Vic 3207, Australia

**Telephone:** +61 3 9320 1111

**Facsimile:** +61 3 9320 1112

**Email:** [enquiries@geicp.com](mailto:enquiries@geicp.com)

## **Americas**

31 Jonathan Bourne Drive, Unit 7  
Pocasset, MA 02559, USA

**Toll Free Phone:** 800 208 0097

**Telephone:** 508 563 1800

**Facsimile:** 508 563 1802

**Email:** [geusa@geicp.com](mailto:geusa@geicp.com)