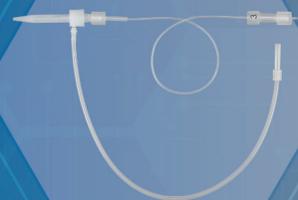


Advanced
Sample Introduction Components
For Agilent 5000 Series ICP Systems



**Elemental
Scientific**

ZipTorch for Agilent 5000 Series ICP Systems

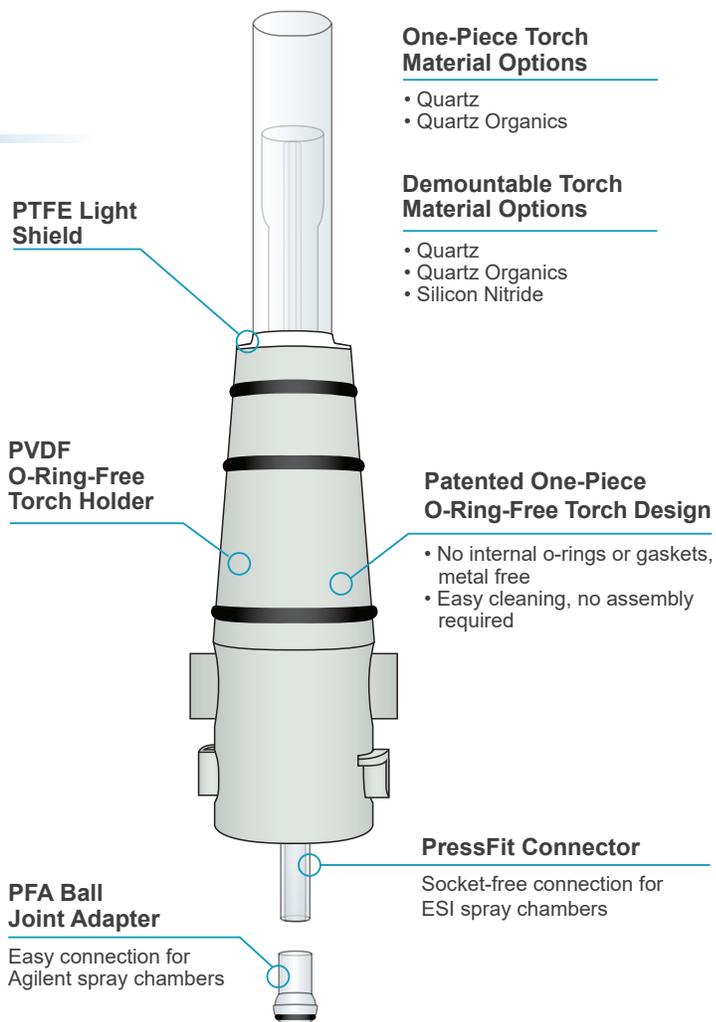
The ZipTorch is an ESI torch designed specifically for the Agilent 5000 Series ICP instruments. ZipTorches can be used interchangeably between the 5100, 5110, 5800, and 5900 SVDV/ VDV models. They are available with fixed or demountable injectors.

ZipTorch Design

- One-piece base
- Automatic gas connections
- Available in
 - One-piece or demountable injector
 - Quartz, Quartz Organics, or Silicon Nitride

ZipTorch Benefits

- Easy Cleaning
- Highly reproducible installation position
- No user contact with torch tubes
- Torch or injector can be exchanged in seconds
- Direct connection to ESI spray chambers
- PFA adapter included for easy connection to Agilent ball-joint equipped spray chambers



ZipTorch For Agilent 5000 Series – Ease of Installation

The ZipTorch can be installed in seconds in all models of the Agilent 5000 Series ICPs.



Installing a ZipTorch on Agilent 5100

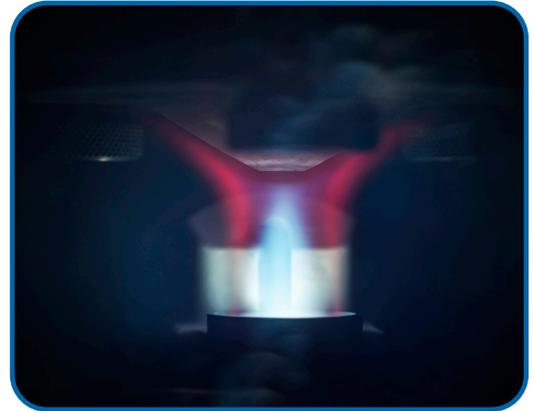


Installing a ZipTorch on Agilent 5900

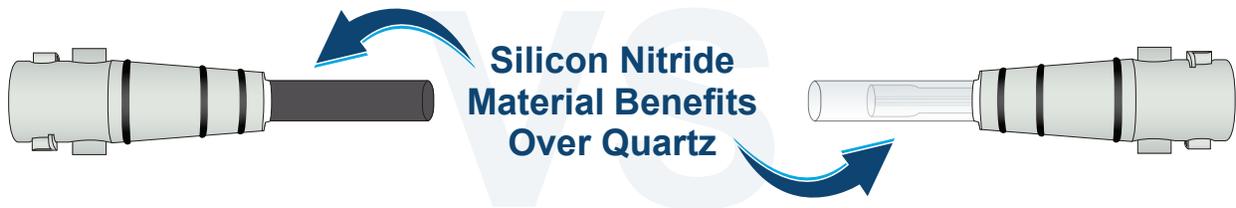
Nitride Torch

The Nitride Torch is a direct replacement for the standard quartz torches in the Agilent 5000 ICP systems. It provides substantial enhancements in chemical resistance and structural stability over standard quartz torch designs, significantly reducing both long-term operating costs and observed background levels.

Ultimate in Chemical Resistance and Extended Lifetime



Nitride Torch with Yttrium on the Agilent 5900



IDS20-65
Demountable Nitride Torch

Strength

- Silicon nitride is a ceramic material that is not compromised by the high temperatures of the argon plasma
- Heat is conducted more evenly across the silicon nitride torch body, reducing thermal stress and resulting in significant advantages over quartz torches that can form stress cracks and fail

Chemical Resistance

- The Nitride Torch is highly resistant to chemical attack by high matrix components in the plasma. Nitride torches do not devitrify and have a long lifetime
- Nitride Torch is the optimal torch for analyzing samples high in salts, fusion digests, and organic solvents
- Low background levels for silicon measurements are achieved

Economical

- Compared to quartz, up to 100x lifespan can be expected when running high matrix samples
- Eliminating frequent replacement of quartz torches results in significantly reduced operating costs

Nitride Torch Advantages

Direct replacement of standard Agilent 5000 ICP torch with same analytical performance and detection limits

Unique construction with intermediate and outer tubes constructed from silicon nitride provides the longest lifetime and highest possible chemical resistance

Utilizes the same ESI interchangeable injectors (quartz, ceramic, & sapphire) as the Quartz ZipTorches

Selecting the Best Torch for your Application(s)



0.8 – 1.5 mm injectors for organic solvents, 1.8 mm standard size, and 2.0-2.4 mm for high matrix samples

Torch	Aqueous	Low Volatility Organics	High Volatility Organics	High Salt Matrix / Fusion	Benefits
Quartz One-Piece	✓	✓			<ul style="list-style-type: none"> Simplicity with one-piece design
Quartz Demountable	✓	✓	✓		<ul style="list-style-type: none"> Flexibility to change injectors, injector material, and injector diameter
Quartz One-Piece Organics	✓	✓	✓		<ul style="list-style-type: none"> Greater resistance to cracking from heat Simplicity with one-piece design
Quartz Demountable Organics	✓	✓	✓		<ul style="list-style-type: none"> Greater resistance to cracking from heat Added flexibility to change injectors
Nitride Demountable	☑	☑	☑	☑	<ul style="list-style-type: none"> No devitrification from sample matrix Greatly extended life without replacement equals lower cost Flexibility to change injectors Appropriate for all sample types

One-Piece ZipTorches

The One-Piece ZipTorches have an integrated quartz injector for simplicity, easy maintenance, and quick torch alignment. The injector tube provides direct connection to PressFit ESI spray chambers, and a PFA Ball Joint connector (ES-5520) is included for connection to Agilent spray chambers.

Quartz Organics ZipTorches are specially constructed of Cerulent – a doped quartz which enhances resistance to cracking caused by temperature swings from the introduction of organic solvents.

One-Piece Torches for Agilent 5000 SVDV/VDV ICPs	Part Number
Quartz ZipTorch with fixed 1.8 mm ID injector, standard for SVDV/VDV models	T18Q-65
Quartz ZipTorch with fixed 2.4 mm ID injector, for high solids applications	T24Q-65
Quartz Organics ZipTorch with fixed 0.8 mm ID injector, high stability torch for volatile organics applications	T08-O-65
Quartz Organics ZipTorch with fixed 1.4 mm ID injector, for semi-volatile organic solvent applications	T14-O-65



T18Q-65 Quartz One-Piece ZipTorch

T08-O-65 Quartz Organics One Piece ZipTorch

Demountable ZipTorches

The demountable ZipTorches utilize a removable and replaceable injector, providing flexibility for selecting the appropriate injector size and material for multiple applications. Also recommended for HF-containing samples, when a ceramic or sapphire injector is required. The removable injector design allows the user to remove the injector for cleaning without removal of the torch body from the instrument. Available in Quartz, Quartz Organics, and Nitride Torch models, requires Demountable Injector.

Demountable Torches for Agilent 5000 SVDV/VDV ICPs	Part Number
Quartz Demountable ZipTorch	DTQ-65
Quartz Organics Demountable ZipTorch	DTO-65
Nitride Demountable Torch	DTN-65



DTQ-65
Quartz
Demountable
Torch



DTN-65
Nitride
Demountable
Torch



DTO-65
Quartz Organic
Demountable
Torch

Injectors for Demountable ZipTorches

These demountable injectors are designed for use with the Quartz, Organics, and Nitride torches.

- Quartz is used for a wide range of non-HF aqueous applications
- Sapphire is used for high-purity applications and when HF is present

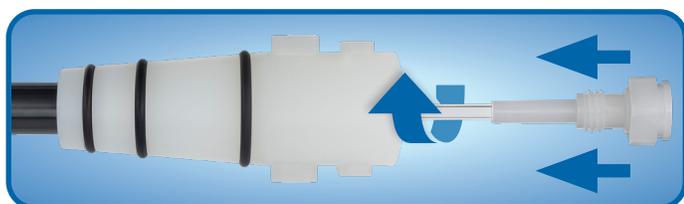
Injectors for Agilent 5000 SVDV/VDV ICP Demountable Torches	Injector Size (mm)	Part Number
Quartz Demountable Injector	0.8	IDQ08-65
	1.4	IDQ14-65
	1.8	IDQ18-65
	2.4	IDQ24-65
Sapphire Demountable Injectors	1.5	IDS15-65
	1.8	IDS18-65
	2.4	IDS24-65



IDQ18-65
Quartz Injector



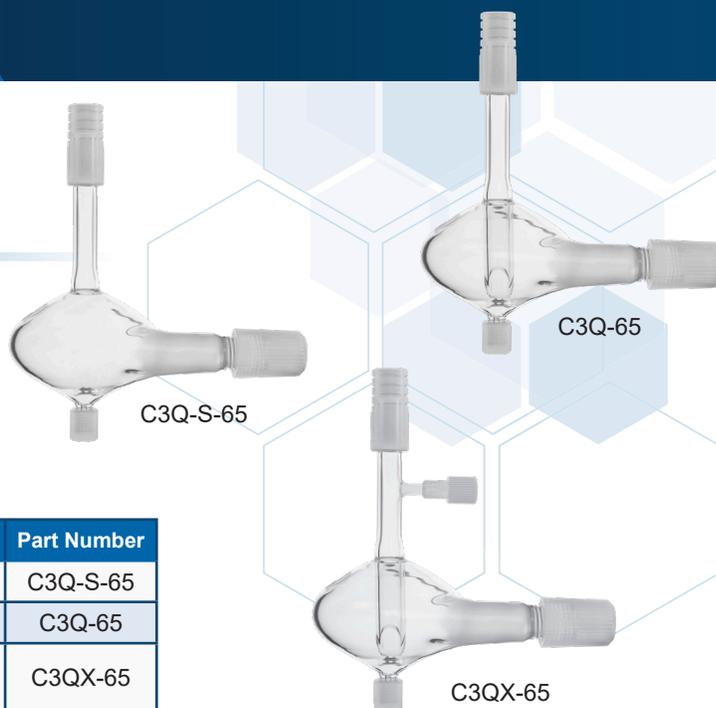
IDS18-65
Sapphire Injector



*Quickly and easily
install injectors
into demountable torches*

Spray Chambers for Agilent 5000 Series ICP Systems

Cyclonic quartz spray chambers are recommended for most non-HF applications, providing excellent washout characteristics. They are available in both single-pass (non-baffled) and double-pass (baffled) designs, with a PressFit coupling to the torch.



Cyclonic Spray Chambers for Agilent 5000 Series ICP	Part Number
Quartz PressFit Single-Pass/Non-Baffled Spray Chamber	C3Q-S-65
Quartz PressFit Double-Pass/Baffled Spray Chamber	C3Q-65
Quartz PressFit Double-Pass/Baffled Spray Chamber with additional gas port	C3QX-65

OneTouch Nebulizers for Agilent 5000 Series ICP

Ready to Install. Ready to Perform.

The **MEINHARD® OneTouch Nebulizer** combines high sensitivity performance with high total dissolved solids (TDS) capability into a pre-configured ready-to-install glass nebulizer. Gas and liquid connections are customized for Agilent 5000 ICPs.

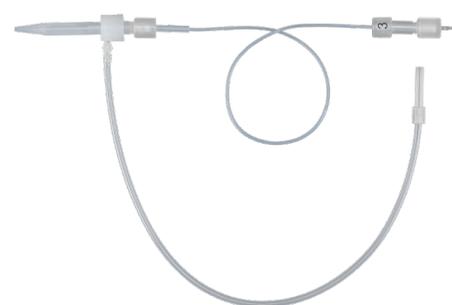
The **PFA MicroFlow OneTouch Nebulizer** is chemically-resistant and is also pre-fitted with fluoropolymer OneTouch gas line for quick and secure connection to Agilent 5000 ICP Systems. The liquid line is configured for direct connection to ESI FAST and prepFAST systems or peristaltic pump tubing with a supplied barb fitting. This high-efficiency PFA nebulizer is perfect use with HF, high-salt, and other aggressive sample matrices.

OneTouch Nebulizers Provide

- Customized pre-fitted OneTouch gas line with integrated fluoropolymer fitting for secure installation
- Custom OneTouch liquid capillary minimizes dead volume and uptake delay
- Fluoropolymer sample line supplied with a barbed fitting for no-leak connection to peristaltic pump tubing
- PFA MicroFlow OneTouch Nebulizer designed with optimized ID for seamless coupling to all ESI FAST and prepFAST valve-equipped systems with coded fluoropolymer fitting



K65
MEINHARD®
OneTouch Nebulizer



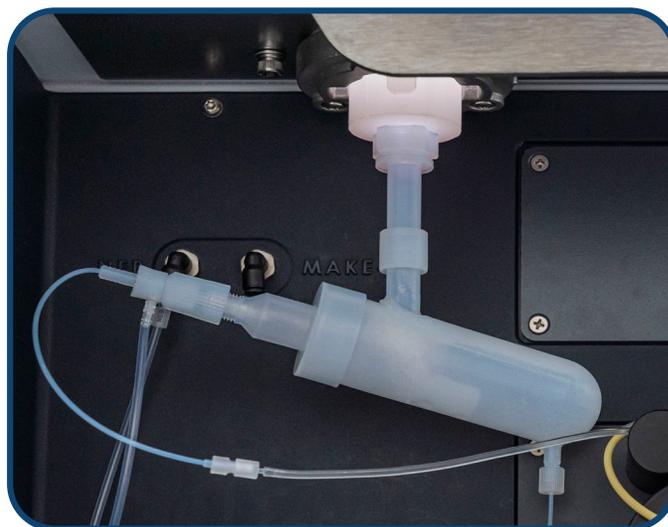
ST3-65
PFA MicroFlow
OneTouch Nebulizer

OneTouch Nebulizers for Agilent 5000 Series ICP	Part Number
MEINHARD® OneTouch glass nebulizer, with OneTouch gas connector, threaded liquid connector and barbed fitting for peristaltic pump tubing	K65
PFA MicroFlow OneTouch Nebulizer, with OneTouch gas connector, 1/4-28 threaded liquid connector and barbed fitting for peristaltic pump tubing	ST3-65

Sample Introduction Kits for Agilent 5000 ICP Systems

ESI Sample Introduction Kits are designed to be extremely stable and provide the highest performance and sensitivity. They provide complete application-based solutions spanning from the peripump tubing through to the torch for all Agilent 5000 Series ICPs.

- The Quartz Sample Introduction Kits provide full introduction solutions for Aqueous, High Matrix and Organic Solvents applications
- Nitride Torch Kits add the high chemical resistance and extended lifetime provided by the Nitride demountable torch
- Fluorospray Kits are ideal for high purity chemicals, geochem, metallurgy and other HF-containing samples with their PFA nebulizers, PFA spray chambers and demountable sapphire injectors



Fluorospray Sample Introduction Kit installed on Agilent 5900 ICP



Sample Introduction Kit	Nebulizer	Spray Chamber	Torch	Injector	Part Number
Quartz Standard	K65 Glass OneTouch	Quartz PressFit Single-Pass	Quartz One-Piece ZipTorch	Quartz 1.8 mm ID	SK-2365Q-Q18
Quartz High Matrix	K65 Glass OneTouch	Quartz PressFit Double-Pass	Quartz One-Piece ZipTorch	Quartz 2.4 mm ID	SK-2365Q-Q24
Quartz Organics	K65 Glass OneTouch	Quartz PressFit Double-Pass	Quartz Organics One-Piece ZipTorch	Quartz 1.4 mm ID	SK-2365O-Q14
Nitride Torch	K65 Glass OneTouch	Quartz PressFit Double-Pass	Nitride Demountable	Sapphire 1.8 mm ID Demountable	SK-2365NQ-S18
Fluorospray Standard	ST3-65 PFA MicroFlow OneTouch	Fluorospray PFA	Quartz Demountable ZipTorch	Sapphire 1.8 mm ID Demountable	FS-2365-S18
Fluorospray High Matrix	ST3-65 PFA MicroFlow OneTouch	Fluorospray PFA	Quartz Demountable ZipTorch	Sapphire 2.4 mm ID Demountable	FS-2365-S24
Fluorospray Organics	ST3-65 PFA MicroFlow OneTouch	Fluorospray PFA	Quartz Demountable ZipTorch	Sapphire 1.5 mm ID Demountable	FS-2365-S15
Fluorospray Nitride Torch	ST3-65 PFA MicroFlow OneTouch	Fluorospray PFA	Nitride Demountable	Sapphire 1.8 mm ID Demountable	FS-2365NP-S18

*Sample Introduction Kits include peristaltic pump tubing and all lines to fully support sample uptake and spray chamber drain connections.

Advanced Automation

for Agilent 5000 Series ICP Systems

DX Autosamplers – Capacities from 2 micro racks up to 14 large racks

DXCi Autocorrecting Autosamplers – Always goes to the proper position

Fluoronic Autosamplers – Ultra-clean and ultimate in corrosion resistance

SampleSense FAST – Automated sample detection and injection

prepFAST X – Fully automated uptake, calibration, and dilutions



2DXCi Autosampler with SampleSense FAST
on Agilent 5900 ICP

LEARN MORE



www.icpms.com

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Sample Introduction Accessories*

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www.meinhard.com

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