

# MEINHARD®

2014 Catalog

## Sample Introduction and Consumables



# MEINHARD®

## ICP Glass & Quartz Components Since 1974

Since 1974, MEINHARD® nebulizers have been the industry standard: the best performance; the best value. Today, MEINHARD® nebulizers are standard on the largest selling ICP and ICPMS instruments. Our High Efficiency Nebulizer is the top-rated glass microconcentric nebulizer. Our Direct Injection High Efficiency Nebulizer is unmatched. All are available in quartz as well as borosilicate glass.

Introduced in 2011, the Plus Series Nebulizers feature an innovative, low-internal-volume capillary for fast sample analysis (wash-in and wash-out) and include high-purity gas and liquid fittings. They are available in borosilicate glass and quartz, as well as ultra high purity quartz for the most demanding applications.

MEINHARD® - Elemental Scientific Glassblowing wants to be your source for total sample introduction solutions. We are pleased to offer nebulizers in Teflon® PFA and polypropylene from Elemental Scientific. These microconcentric nebulizers are especially useful for small-volume samples and highly-corrosive solutions like HF. The Noordermeer v-groove nebulizer can handle suspended solids of 10% or more without clogging. The Burgener MiraMist® in Teflon® extends that capability to highly-corrosive solutions.

MEINHARD® - Elemental Scientific Glassblowing manufactures a broad array of spray chambers in glass and quartz: Scott double-pass, conical, cyclonic, double-pass cyclonic. We can fit your instrument or custom manufacture for your needs. We also offer double-pass spray chambers from ESI in Teflon® PFA for ultra-high-purity and corrosion resistance. ESI's cyclonic spray chambers in PFA are just the thing for ICP analysis of HF solutions.

MEINHARD® - Elemental Scientific Glassblowing has torches for all ICP and ICPMS instruments that are currently available, along with torches for instruments that have been out of production for ten years or more. Our quality is guaranteed; our prices are unrivaled.

If you would like to talk to our sample introduction experts, call or email. We will be pleased to work with you to get the most out of your ICP or ICPMS.

### Ordering Information:

You may contact us via phone, fax, e-mail, or through our website.

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## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 2 mL/min, 1 L/min @ 30 psi (G1820-65138)	TQ-30-A2



TQ-30-A2  
Type A Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi (G1820-65030)	TR-30-A1



TR-30-A1  
Type A Glass  
Nebulizer

## PTFE and PEEK Nebulizers

Description	Part Number
Burgener PTFE MiraMist parallel-path nebulizer. Includes an argon line and sample capillary. (G3161-80001)	TMM3500
Burgener PEEK MiraMist parallel-path nebulizer. Includes an argon line and sample capillary. (G3161-80000)	PMM4000



PMM4000  
PEEK MiraMist  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner



### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids  
Accessory

### Spray Chambers

Description	Part Number
Quartz spray chamber, double pass, 12/5 socket for HP4500 and HP7500 (G1820-65337)	ML190013
Quartz spray chamber, double pass, 12/5 socket, extended inner for cross-flow nebulizer (G1820-65339)	ML190014
Quartz spray chamber, top socket, 90° bend	ML190015
Quartz spray chamber with Easy-Seal threaded nebulizer inlet and PFA cap	ML190015ES
Quartz spray chamber, double pass (G3280-80008)	ML190060



ML190013  
Double Pass  
Spray Chamber

### SSI Spray Chamber

Description	Part Number
Quartz SSI high-stability dual spray chamber (ES-3262-1111)	ME32621111

### PFA Spray Chamber

Description	Part Number
35 mm HF resistant PFA spray chamber with PFA PureCap endcap (ES-2122-5351)	ME21225351



ME21225351  
35 mm PFA Spray Chamber

### PFA Connectors

Description	Part Number
PFA connector for Agilent 7500 ESI injector (ES-2122-7572)	ME21227572
PFA connector for Agilent 7700 ESI injector (ES-2122-7772)	ME21227772



ME21227572  
PFA Connector

### PTFE Endcap

Description	Part Number
PTFE adapter (endcap) 6mm nebulizer to 35mm spray chamber (G1820-65121)	MM151030



MM151030  
PTFE Endcap

### PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler. Includes a quartz cyclonic spray chamber with 12/5 socket. (ES-4162-1118)	ME41621118



ME41621118  
PC<sup>3</sup> Peltier Cooler

## PC<sup>3</sup> Mounting Shelves

Description	Part Number
PC <sup>3</sup> mounting shelf for Agilent 7500 (ES-2999-6221)	ME29996221
PC <sup>3</sup> mounting shelf for Agilent 7700 (ES-2999-6277)	ME29996277



ME29996221  
PC<sup>3</sup> Mounting Shelf

## O-Ring-Free Quartz Torches, Demountable Injector

Description	Part Number
HP 7700 quartz torch, demountable (ES-1302-7700)	ME13027700
HP 7500 o-ring-free quartz torch, axial, demountable (ES-1302-7500)	ME13027500
HP 4500 o-ring-free quartz torch, demountable (ES-1302-4500)	ME13024500



ME13024500  
Quartz Torch

## Quartz One-Piece Torches

Description	Part Number
HP 7500 quartz torch, axial, fixed 2.5 mm injector, 2 placement pins, HMI compatible (G3270-67002)	ML190022
HP 4500 quartz torch, fixed 1.5 mm injector, for organics (ES-1302-4510)	ME13024510
HP 4500 quartz torch, fixed 1.0 mm injector, for oils (G1820-65528)	ML190004
HP 4500 quartz torch, fixed 2.5 mm injector (G1820-65028)	ML190005
HP 4500 quartz torch, fixed 1.5 mm injector (G1820-65229)	ML190006
HP 7500 quartz torch, axial, fixed 2.5 mm injector, 2 placement pins, HMI compatible (G1833-65423)	ML190010
HP 7500 quartz torch, fixed 1.5 mm injector, placement pin (G1833-65424)	ML190011
HP 7500 quartz torch, axial, fixed 1.0 mm injector, placement pin, for oils (G1833-65425)	ML190012
HP 7700 quartz torch, fixed 2.5 mm injector (G3280-80001)	ML190050
HP 7700 quartz torch, fixed 1.5 mm injector (G3280-80004)	ML190051
HP 7700 quartz torch, fixed 1.0 mm injector (G3280-80005)	ML190052



ML190010  
Quartz Torch with  
2.5 mm Injector

## Quartz Torches, Demountable Injector

Description	Part Number
HP 4500 quartz torch, axial, demountable (G1820-65035)	ML190008
HP 7500 quartz torch, axial, demountable, placement pin (G1833-65422)	ML190009



ME13027700  
Quartz Torch

## Torch Shields

Description	Part Number
HP 4500 quartz torch shield (G1820-65026)	ML190018
HP 7500 quartz torch shield with glass dot, 24.5mm (G1833-65421)	ML190043

ML190043  
Torch Shield





### O-Ring-Free Quartz Injectors, Demountable

Description	Part Number
O-ring-free quartz injector, 1.0 mm (ES-1323-7100)	ME13237100
O-ring-free quartz injector, 1.5 mm (ES-1323-7150)	ME13237150
O-ring-free quartz injector, 2.0 mm (ES-1323-7200)	ME13237200
O-ring-free quartz injector, 2.5 mm (ES-1323-7250)	ME13237250



ME13237250  
O-ring-free Quartz  
Injector

### O-Ring-Free Sapphire Injectors, Demountable

Description	Part Number
O-ring-free sapphire injector, HF resistant, 1.0 mm (ES-1303-7100)	ME13037100
O-ring-free sapphire injector, HF resistant, 1.5 mm (ES-1303-7150)	ME13037150
O-ring-free sapphire injector, HF resistant, 1.6 mm (ES-1303-7160)	ME13037160
O-ring-free sapphire injector, HF resistant, 1.8 mm (ES-1303-7180)	ME13037180



ME13037180  
O-ring-free  
Sapphire Injector

### O-Ring-Free Platinum Injectors, Demountable

Description	Part Number
O-ring-free platinum injector, HF resistant, 1.5 mm (ES-1313-7150)	ME13137150
O-ring-free platinum injector, HF resistant, 1.8 mm (ES-1313-7180)	ME13137180
O-ring-free platinum injector, HF resistant, 2.0 mm (ES-1313-7200)	ME13137200
O-ring-free platinum injector, HF resistant, 2.5 mm (ES-1313-7250)	ME13137250



ME13137200  
O-ring-free  
Platinum Injector

### Ball To Socket Adapters

Description	Part Number
HP 4500 quartz adapter, ball to socket, 56 mm (G1820-80237)	ML190038
HP 7500 quartz adapter, ball to socket, 82 mm (G1833-65426)	ML190041
HP 7700 quartz adapter, ball to socket, 103 mm (G3270-80025)	ML190066
HP 4500 Pyrex adapter, ball to socket, 56 mm (G1820-80235)	ML190045
HP 7500 Pyrex adapter, ball to socket, 82 mm	ML190040



ML190038  
Ball to Socket Adapter

### Ball To Socket T-Connectors

Description	Part Number
HP 7500 quartz T-connector with optional gas inlet, ball to socket, 82 mm (G1833-65427)	ML190044
HP 7700 quartz T-connector with optional gas inlet, ball to socket, 103 mm (G3270-80024)	ML190065



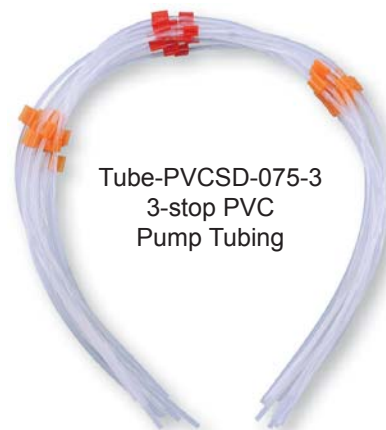
ML190065  
Ball to Socket T-Connectors

### 1/4" To Socket Adapter

Description	Part Number
HP 7500 quartz adapter, 1/4" end to socket	ML190033

## 3-Stop PVC Peristaltic Pump Tubing

Description	Part Number
3-stop PVC pump tubing, 0.19 mm ID, (orange/red/orange), 12 pc (G183365571)	Tube-PVCSD-075-3
3-stop PVC pump tubing, 1.02 mm ID, (white/white/white), 12 pc (G183365569)	Tube-PVCSD-40-3
3-stop PVC pump tubing, flared, 0.19 mm ID, (orange/red/orange), 12 pc	Tube-PVCSD-075-3-F



## 3-Stop Santoprene Peristaltic Pump Tubing

Description	Part Number
3-stop Santoprene pump tubing, 1.52 mm ID, (yellow/blue/yellow), 12 pc (G183365570)	Tube-SanSD-60-3



## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc (G182065215)	Tube-PVCSD-40
2-stop PVC pump tubing, 1.65 mm ID, (blue/blue), 12 pc	Tube-PVCSD-65
2-stop PVC pump tubing, flared, 0.19 mm ID, (orange/red), 12 pc (G328067008)	Tube-PVCSD-075-F
2-stop PVC pump tubing, flared, 0.27 mm ID, (orange/blue), 12 pc (G328067047)	Tube-PVCSD-10-F



## 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 1.02 mm ID, (white/white), 12 pc	Tube-SolFSD-40
2-stop SolventFlex pump tubing, 1.65 mm ID, (blue/blue), 12 pc	Tube-SolFSD-65





## Sampling Cones

Description	Part Number
Ni plated sampling cone, Cu base (G3280-67061)	MC-67061
Ni sampling cone for T-mode , Ni base (G1820-65480)	MC-65480
Ni sampling cone, Cu base (G3280-67040)	MC-67040
Ni sampling cone, Cu base (G1820-65238)	MC-65238
Pt sampling cone, 10 mm insert, Cu base (G1820-65239)	MC-65239
Pt sampling cone, 18 mm insert, Cu base (G1820-65360)	MC-65360
Pt sampling cone, 18 mm insert, Cu base (G3280-67056)	MC-67056
Pt sampling cone, Cu base (G3280-67036)	MC-67036
Gaskets - Graphite for sampler (qty 3) (G3280-67009)	MC-67009
O-ring - Viton for sampler (qty 1) (G1820-65025)	MC-65025



MC-67040  
Ni Sampling Cone

## Skimmer Cones

Description	Part Number
Cu skimmer cone, Cu base (G3280-67067)	MC-67067
Ni skimmer cone for T-mode, Ni base (G1820-65481)	MC-65481
Ni skimmer cone, Ni base (G3270-65024)	MC-65024
Ni skimmer cone, Ni base (G1833-65497)	MC-65497
Ni skimmer cone, Ni base (G1820-65050)	MC-67050
Ni skimmer cone, Ni base (G3280-67066)	MC-67066
Ni skimmer cone, Ni base (G3280-67041)	MC-67041
Pt skimmer cone , Cu base (G3280-67060)	MC-67060
Pt skimmer cone, Cu base (G1833-65092)	MC-65092
Pt skimmer cone, Cu base (G1833-65132)	MC-65132
Pt skimmer cone, Cu base (G1820-65237)	MC-65237
Pt skimmer cone, Cu base (G3280-67064)	MC-67064
Pt skimmer cone, Ni base (G3270-60106)	MC-60106
Pt skimmer cone, Ni base (G3280-67065)	MC-67065
Pt skimmer cone, Ni base (G3280-67063)	MC-67063



MC-67041  
Ni Skimmer Cone

## Shield Plates

Description	Part Number
Ag Shield Plate (G1833-65419)	MC-65419-Ag
Pt Shield Plate (G1820-65357)	MC-65357
Pt Shield Plate (G1833-65419)	MC-65419



MC-65419-Ag  
Ag Shield Plate

## Electron Multipliers

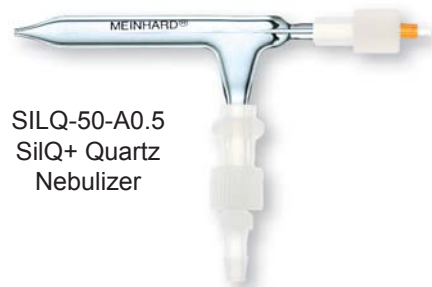
Description	Part Number
ETP Electron Multiplier, Varian UltraMass 700	MC-AF566
ETP Electron Multiplier, Agilent 4500 (G1820-80386)	MC-AF573
ETP Electron Multiplier, Agilent 7700 / 8000 (5190-0108)	MC-00108
ETP Electron Multiplier, Agilent 7500 (G1833-65420)	MC-AF222



MC-AF222  
ETP Electron Multiplier

## Quartz Nebulizers

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 2 mL/min, 1 L/min @ 30 psi	TQ-30-A2
MEINHARD® Type C+ concentric quartz nebulizer with PFA argon and sample line connectors, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQP-30-C1
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5



SILQ-50-A0.5  
SilQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 1 L/min @ 30 psi (2010076500)	TR-30-C2
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 mL/min @ 30 psi (2010069500)	TR-30-K2
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 0.7 L/min @ 30 psi (2010081600)	TR-30-K3



TRP-30-C1  
Type C Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer (G3161-80000). Includes an argon line and sample capillary.	PMM4000

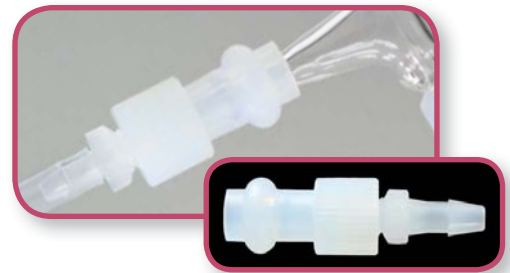


PMM4000  
PEEK MiraMist Nebulizer



### FG Gas Quick Connect for MEINHARD® Nebulizers

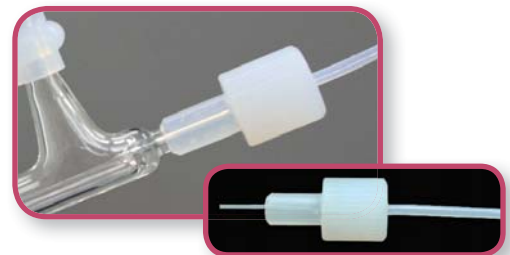
Description	Part Number
FG Gas Quick Connect for MEINHARD® Nebulizers with maria for both small bore and standard bore nebulizers.	FG



FG  
FG Gas Quick Connect

### F0 Encapsulated Micro Tubing

Description	Part Number
F0 Encapsulated micro tubing for low uptake rates from 0.1 to 0.5 mL/min and the lowest internal volume of any nebulizer. Includes 0.25 mm i.d. ■ (green marker) 70 cm long micro capillary.	F0-25



F0-25  
F0 Encapsulated Micro Tubing

### F1 Detachable Capillary

Description	Part Number
F1 Detachable capillary for a wide range of applications. Includes 0.80 mm i.d. ■ (blue marker) 70 cm long capillary.	F1-80



F1-80  
F1 Detachable Capillary

### F2 Standard PFA Integrated Capillary

Description	Part Number
F2 Standard integrated capillary for self-aspiration or pumping. Includes 0.5 mm i.d. ■ (orange marker) 70 cm long capillary.	F2-50



F2-50  
F0 Encapsulated Micro Tubing

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

## pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

## Cyclonic Spray Chambers

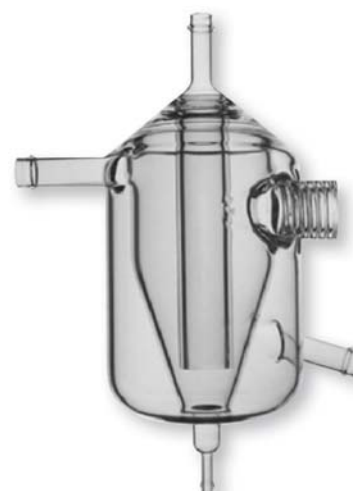
Description	Part Number
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, baffled, 8 mm top, Unifit (7910043700)	ML180019
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, baffled, with Easy-Seal threaded nebulizer inlet and PFA cap, 8 mm top, Unifit	ML180019ES
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, no baffle, 8 mm top, o-ring inlet (2010081700)	ML180021
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, no baffle, with Easy-Seal threaded nebulizer inlet and PFA cap, 8 mm top, o-ring inlet	ML180021ES
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, with baffle, o-ring inlet	ML180022
Agilent 7x0 (Varian) Pyrex cyclonic spray chamber, with baffle, Unifit	ML180013



ML180021  
Cyclonic Spray Chamber

## Jacketed Spray Chamber

Description	Part Number
Glass spray chamber, jacketed for coolant (9910070400)	ML180023



ML180023  
Jacketed Spray Chamber



### Unifit Adapter

Description	Part Number
Unifit adapter, 6 mm glass concentric nebulizer to 12 mm inlet port (218080256)	ML130024



ML130024  
Unifit Adapter

### PFA Spray Chamber

Description	Part Number
47 mm HF resistant PFA spray chamber with PFA PureCap endcap (ES-2128-5471)	ME21285471



ME21285471  
47mm PFA Spray Chamber

### PFA Spray Chamber Mounting Bracket

Description	Part Number
Mounting bracket for the 47 mm PFA spray chamber ES-2128-5471 (ES-2999-6501)	ME29996501



ME29996501  
Mounting Bracket

### Quartz One-Piece Torches

Description	Part Number
Quartz torch, axial with 90° bend, fixed 2.3 mm injector (2010090400)	ML180017
Quartz torch, axial, high solids, fixed injector (2010094800)	ML180050
Quartz torch, axial, fixed 2 mm injector (2010081200)	ML180014
Quartz torch, radial, low-flow, fixed 1.5 mm injector (2010069690)	ML180005
Quartz torch with ball joint, radial, fixed 1.5 mm injector (2010069610)	ML180005B
Quartz torch, radial, fixed 0.8 mm injector (2010117400)	ML180028
Quartz torch, radial, fixed 1.4 mm injector (2010117500)	ML180029



ML180017  
Quartz One-Piece Torch

### Quartz Torches, Demountable Injector

Description	Part Number
Quartz torch, demountable, axial, body only (2010083400)	ML180015
Quartz torch, demountable, radial, body only (2010072900)	ML180010
O-ring-free quartz torch, demountable (ES-1842)	ME1842



ML180015  
Quartz Torch

## Torch with Demountable Injector

Description	Part Number
Quartz torch, demountable, with o-ring-free sapphire injector in PFA base (ES-1842-1100)	ME18421100

## Torch Bonnet

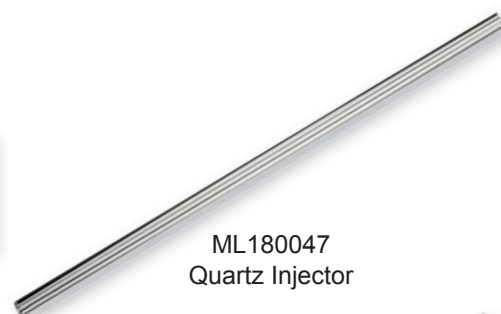
Description	Part Number
Quartz torch bonnet, radial (2010070700)	ML180025



ML180025  
Torch Bonnet

## Quartz Injectors

Description	Part Number
Quartz injector, 0.8 mm, for organic samples (2010077500)	ML180047
Quartz injector, 1.4 mm (9910057000)	ML180046



ML180047  
Quartz Injector

## Alumina Injector

Description	Part Number
Alumina injector, 1.9 mm (2410067590)	MA6759



MA6759  
Alumina Injector

## O-ring-free Sapphire Injector

Description	Part Number
O-ring-free sapphire injector, 1.8 mm. Use with ESI precision quartz torch and spray chamber. (ES-1843-0180)	ME18430180



ME18430180  
Sapphire Injector

## O-ring-free Platinum Injector

Description	Part Number
O-ring-free platinum injector, 2 mm. Use with ESI precision quartz torch and spray chamber. (ES-1842-3020)	ME18423020

### Injector Holder

Description	Part Number
PTFE injector holder for Varian-ES series, Liberty, Vista & Ultramass-700 (9910057300)	MP180048



MP180048  
Injector Holder

### Male Barbed Connector

Description	Part Number
Male barbed PFA connector for transfer line (ES-4399-2300)	ME43992300



ME43992300  
Male Barbed  
Connector

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc (3710027200)	Tube-PVCSD-30
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc (3710034400)	Tube-PVCSD-40
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc (3710034500)	Tube-PVCSD-50
2-stop PVC pump tubing, 1.65 mm ID, (blue/blue), 12 pc (3170034600)	Tube-PVCSD-65



Tube-PVCSD-30  
2-stop PVC  
Pump Tubing

### 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 0.76 mm ID, (black/black), 12 pc (3710034800)	Tube-SolFSD-30
2-stop SolventFlex pump tubing, 1.02 mm ID, (white/white), 12 pc (3710035000)	Tube-SolFSD-40
2-stop SolventFlex pump tubing, 1.30 mm ID, (gray/gray), 12 pc (3710035200)	Tube-SolFSD-50
2-stop SolventFlex pump tubing, 1.65 mm ID, (blue/blue), 12 pc (3710067900)	Tube-SolFSD-65



Tube-SolFSD-30  
2-stop SolventFlex  
Pump Tubing

### 2-Stop Viton Peristaltic Pump Tubing

Description	Part Number
2-stop Viton pump tubing, 0.51 mm ID, (orange/yellow), 12 pc (3710043500)	Tube-Viton-20

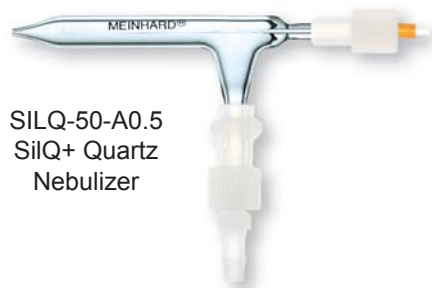


Tube-Viton-20  
2-stop Viton Pump Tubing



## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1



SILQ-50-A0.5  
SiIQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5mL/min, 1L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1mL/min, 1L/min @ 30 psi	TR-30-A1
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 1 L/min @ 30 psi (2010076500)	TR-30-C2
MEINHARD® Type K glass nebulizer, lapped, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 0.7 L/min @ 30 psi (2010081600)	TR-30-K1
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TR-50-A0.5
MEINHARD® Type K glass nebulizer, lapped, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 0.7 L/min @ 50 psi (2010069500)	TR-50-K2



TR-50-K2  
Type K Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids  
Accessory

### Spray Chamber

Description	Part Number
Quartz spray chamber, double pass (0102-932)	ML180031



ML180031  
Double Pass Spray Chamber

### Make-up IN-Port 2

Description	Part Number
Quartz Make-up IN-port 2 (0102-933)	ML180033



ML180033  
Make-Up IN-Port 2

### Quartz One-Piece Torches with Ball Joint

Description	Part Number
Quartz torch, radial with ball joint	ML180055
Quartz torch with ball joint, 2 placement pins (2010100700)	ML180030



ML180030  
Quartz One-piece Torch  
with Ball Joint

### Quartz One-Piece Torch

Description	Part Number
Quartz torch, axial, fixed injector (2010078300)	ML180006



ML180006  
Quartz Torch with  
Fixed Injector

### Quartz Torch, Demountable Injector

Description	Part Number
Quartz torch, radial, demountable (2010079390)	ML180011

## Universal Joint Extension

Description	Part Number
Quartz universal joint extension (0102-1064)	ML180032

## Sampling Cones

Description	Part Number
Ni Sampler (without CRI) 820-MS (9910115300)	MC-15300
Pt sampler (without CRI) 820-MS (9910117000)	MC-17000
Ni Sampler (with CRI purge) 820-MS Std (9910135900)	MC-35900
Pt sampler (with CRI purge) 820-MS (9910136000)	MC-36000



MC-15300  
Nickel Sampler Cone

## Skimmer Cones

Description	Part Number
Ni Skimmer (without CRI) C-Series, 820-MS (9910121000)	MC-21000
Pt Skimmer (without CRI) C-Series, 820-MS (9910121100)	MC-21100
Ni Skimmer (with CRI) 820-MS Std (9910121200)	MC-21200
Pt Skimmer (with CRI) 820-MS (9910121300)	MC-21300



MC-21000  
Nickel Skimmer Cone

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc	Tube-PVCSD-30
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc	Tube-PVCSD-40
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50
2-stop PVC pump tubing, 1.65 mm ID, (blue/blue), 12 pc	Tube-PVCSD-65
2-stop PVC pump tubing, 2.0 mm flared, 0.38 mm ID, (orange/green), 12 pc	Tube-PVCSD-15-F
2-stop PVC pump tubing, 2.0 mm flared, 0.51 mm ID, (orange/yellow), 12 pc	Tube-PVCSD-20-F





# pergo

## Argon Humidifier for High TDS Sample Analysis

The *pergo* improves performance of all MEINHARD® nebulizers for the routine analysis of brines, fusion digests and other high TDS samples.

A high-pressure membrane positioned inside a temperature-controlled water reservoir perfuses water vapor into the ICP-MS nebulizer gas stream. By increasing humidity in the argon nebulizer gas, the *pergo* prevents salt deposits at the nebulizer tip, improving short and long-term signal stability.

PRG-01-MAPlus *pergo* high solids accessory with TR+ MEINHARD® nebulizer



### BENEFITS:

- Improved RSDs
- Improved short and long-term stability
- Improved detection limits
- Faster washout
- Ability to use high sensitivity nebulizers for high TDS samples
- Reduce long-term drift
- Extends the length of analytical runs

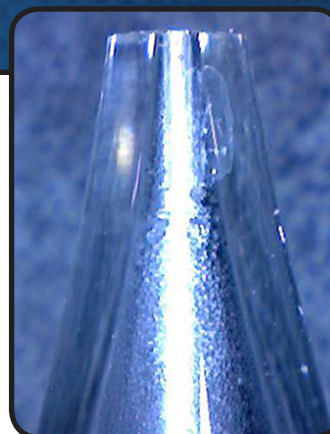
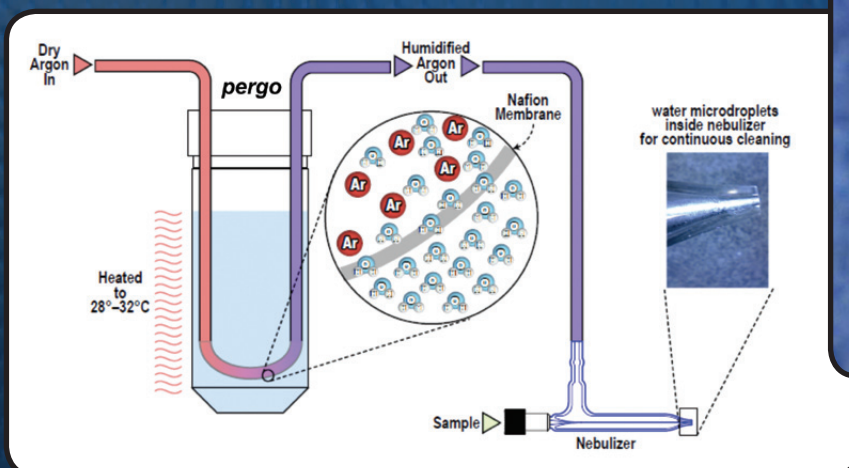
The unique *pergo* design offers many advantages over other types of argon humidifiers.

### ADVANTAGES:

- Higher, more consistent humidity
- Superior long-term stability for high TDS samples
- Safe and easy to use
  - Atmospheric pressure water reservoir
- Optional USB communication for programmable humidity levels



TRP-50 TR+ Glass Nebulizer



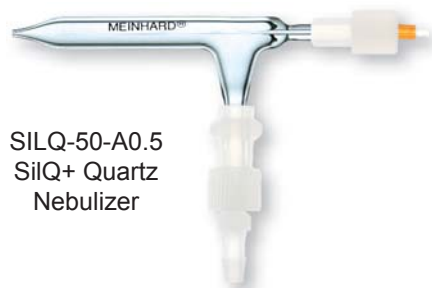
Water microdroplets continuously clean the inside of the nebulizer and prevent salt deposits.

Ar nebulizer gas is humidified using a tube-shaped membrane placed in a PFA water reservoir at atmospheric pressure. The water vapor condenses inside the nebulizer tip, preventing salt build-up.



## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 2 mL/min, 1 L/min @ 30 psi	TQ-30-A2



SILQ-50-A0.5  
SiIQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5mL/min, 1L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1



TR-30-A1  
Type A Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

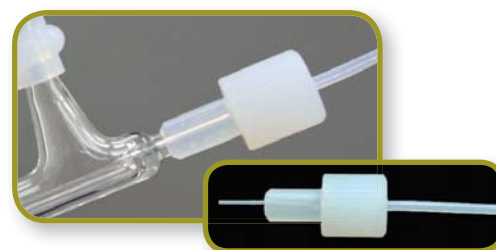
Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## F0 Encapsulated Micro Tubing

Description	Part Number
F0 Encapsulated micro tubing for low uptake rates from 0.1 to 0.5 mL/min and the lowest internal volume of any nebulizer. Includes 0.25 mm i.d. ■ (green marker) 70 cm long micro capillary.	F0-25



F0-25  
F0 Encapsulated Micro Tubing

### F1 Detachable Capillary

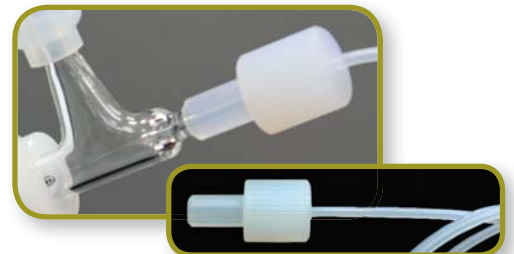
Description	Part Number
F1 Detachable capillary for a wide range of applications. Includes 0.80 mm i.d. ■ (blue marker) 70 cm long capillary.	F1-80



F1-80  
F1 Detachable Capillary

### F2 Standard PFA Integrated Capillary

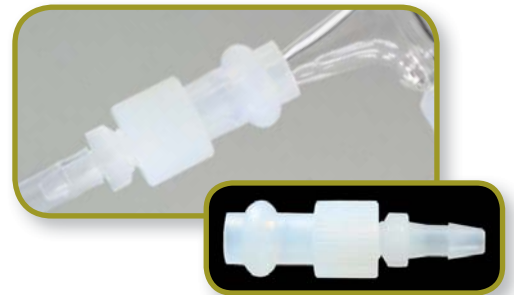
Description	Part Number
F2 Standard integrated capillary for self-aspiration or pumping. Includes 0.5 mm i.d. ■ (orange marker) 70 cm long capillary.	F2-50



F2-50  
F2 Integrated Capillary

### FG Gas Quick Connect for MEINHARD® Nebulizers

Description	Part Number
FG Gas Quick Connect for MEINHARD® Nebulizers with maria for both small bore and standard bore nebulizers.	FG



FG  
FG Gas Quick Connect

### Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids Accessory

# GV-Micromass IsoProbe & Platform

## Spray Chambers

Description	Part Number
Pyrex double pass spray chamber, radial (6368303)	ML165016
Quartz double pass spray chamber (6368308)	ML165015

## Quartz Elbow

Description	Part Number
Quartz elbow, ball / socket (M695210BD1)	ML165020

## PTFE Endcap

Description	Part Number
PTFE adapter (endcap) 6mm nebulizer to 35mm spray chamber	MM151030



MM151030  
PTFE Endcap

## Quartz One-Piece Torch with Ball Joint

Description	Part Number
Quartz torch, axial, fixed 1.5 mm injector (6368301)	ML165005



ML165005  
Quartz One-piece Torch  
with Ball Joint

## Quartz Torch, Demountable Injector

Description	Part Number
Quartz torch, axial, demountable for ISIS (6366307)	ML165008

## Semi-Demountable Torches

Description	Part Number
Semi-demountable o-ring-free torch with sapphire injector and spray chamber adapter (EP-1202-1802)	ME12021802
Semi-demountable o-ring-free torch without injector (EP-1202-0002)	ME12020002



ME12020002  
O-ring-free Torch

## Sapphire Injector, Semi-Demountable Torch

Description	Part Number
Sapphire injector for o-ring-free semi-demountable torch with spray chamber adapter (EP-1203-0182)	ME12030182

### Quartz Bonnet

Description	Part Number
Quartz bonnet (M695531A)	ML165025

### Sampling Cones

Description	Part Number
Ni sampler cone (M749629CD3)	MC-29CD3
Al sampler cone (M749629CD2)	MC-29CD2
Ni sampler cone, Cu base (M695439BD1)	MC-39BD1
Ni sampler, enhanced low-mass performance (M699477CD3)	MC-77CD3
Al sampler, enhanced low-mass performance (M699477CD2)	MC-77CD2
Al sampler cone (M695439BD2)	MC-39BD2
Pt Sampler Cone, copper base (M695439BD1)	MC-39BD1
Copper cartridge (M749630BD1)	MC-30BD1



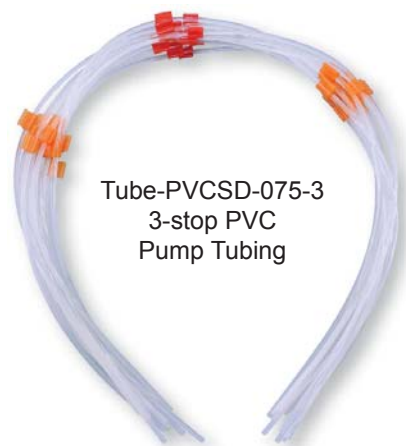
MC-39BD1  
Nickel Sampler Cone

### Skimmer Cones

Description	Part Number
Ni Skimmer Cone (M695440BD1)	MC-40BD1
Al Skimmer Cone (M695440BD2)	MC-40BD2
Ni Skimmer, enhanced low-mass performance (M7001116CD3)	MC-16CD3
Al Skimmer, enhanced low-mass performance (M7001116CD2)	MC-16CD2
Pt skimmer cone (M6955091)	MC-55091

### 3-Stop PVC Peristaltic Pump Tubing

Description	Part Number
3-stop PVC pump tubing, 0.19 mm ID, (orange/red/orange), 12 pc	Tube-PVCSD-075-3
3-stop PVC pump tubing, 1.02 mm ID, (white/white/white), 12 pc	Tube-PVCSD-40-3
3-stop PVC pump tubing, flared, 0.19 mm ID, (orange/red/orange), 12 pc	Tube-PVCSD-075-3-F



Tube-PVCSD-075-3  
3-stop PVC  
Pump Tubing

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, flared, 0.13 mm ID, (orange/black), 12 pc	Tube-PVCSD-051-F
2-stop PVC pump tubing, flared, 0.19 mm ID, (orange/red), 12 pc	Tube-PVCSD-075-F
2-stop PVC pump tubing, flared, 0.27 mm ID, (orange/blue), 12 pc	Tube-PVCSD-10-F
2-stop PVC pump tubing, flared, 0.51 mm ID, (orange/yellow), 12 pc	Tube-PVCSD-20-F
2-stop PVC pump tubing, flared, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50-F



Tube-PVCSD-075-F  
2-stop PVC  
Pump Tubing



## Glass Nebulizers

Description	Part Number
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 1 L/min @ 30 psi (47929002)	TR-30-C2
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 30 psi (47929003)	TR-30-C3
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 30 psi (47929005)	TR-30-K3
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (47929004)	TR-50-C0.5
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 50 psi (47929001)	TR-50-C1
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 50 psi (47929006)	TR-50-C3



TR-50-C1  
Type C Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## Cyclonic Spray Chambers

Description	Part Number
Pyrex cyclonic spray chamber, top socket, 4 mm drain (31030809)	ML116055
Pyrex cyclonic spray chamber with Easy-Seal threaded nebulizer inlet and PFA cap (47929056)	ML116055ES
Cyclonic spray chamber, no baffle (31-031-279)	2015-015NB
Pyrex cyclonic spray chamber, 50 mL, top socket, ground glass tapered (14/20) drain	ML116056
Pyrex cyclonic spray chamber with water jacket for cooling, top socket, 4 mm drain (47929046)	ML116057
Pyrex cyclonic spray chamber, 20 mL, top socket, 4 mm drain (47929049)	ML116060
Pyrex cyclonic spray chamber, axial, taper to top socket, o-ring inlet, 4 mm drain (31031479)	ML116062



ML116055  
Cyclonic Spray Chamber

### Spray Chamber

Description	Part Number
Pyrex Scott Type spray chamber with ground-glass joint (31026996)	ML116054



ML116054  
Pyrex Spray Chamber

### PTFE Endcap

Description	Part Number
PTFE adapter (endcap) 6mm nebulizer to 35mm spray chamber (31-023-549)	MM151030



MM151030  
PTFE Endcap

### Quartz Outer Torch Tubes

Description	Part Number
Quartz demountable outer torch tube with ground step, 71 mm long (ES-1952-9001)	ME19529001
Quartz demountable outer torch tube, radial, 71 mm long (31023722)	ML116050
Quartz demountable outer torch tube, radial, 82.5 mm long	ML116051
Quartz demountable outer torch tube, axial, Panorama 105 mm long (31031099)	ML116070



ME19529001  
Quartz Outer Torch Tube

### Quartz Inner Torch Tubes

Description	Part Number
Quartz demountable inner torch tube (31023723)	ML116052
Quartz demountable outer torch tube, radial, 71 mm long (31023722)	ML116050



ML116052  
Quartz Inner Torch Tube

### Torch Assembly

Description	Part Number
Fully demountable torch assembly (21-356-110)	MP16040



MP16040  
Torch Assembly

## Sheath Gas Tube

Description	Part Number
Pyrex sheath gas tube (21356040)	ML116063



ML116063  
Sheath Gas Tube

## Alumina Injector

Description	Part Number
Alumina injector, 2.0 mm (31021589)	MA1589



MA1589  
Alumina Injector

## Quartz Injector

Description	Part Number
Quartz injector, 2.0 mm	ML116059



ML116059  
Quartz Injector

## Quartz One-Piece Torch

Description	Part Number
Quartz torch, radial, fixed 1.5 mm injector (49010100)	ML135005



ML135005  
Quartz One-Piece  
Torch

## Centering Ring

Description	Part Number
Teflon® centering ring (31023724)	ML116053



ML116053  
Centering Ring

### Viton O-Rings

Description	Part Number
Viton o-rings, pack of 4 (46702525)	MM116200



MM116200  
Viton O-Rings

### O-Ring Kit

Description	Part Number
O-ring kit, demountable torch (9 o-rings)	MM116210



MM116210  
O-Ring Kit

### Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 1.14 mm ID, (red/red), 12 pc	Tube-PVCSD-45
2-stop PVC pump tubing, flared, 0.76 mm ID, (black/black), 12 pc	Tube-PVCSD-30-F

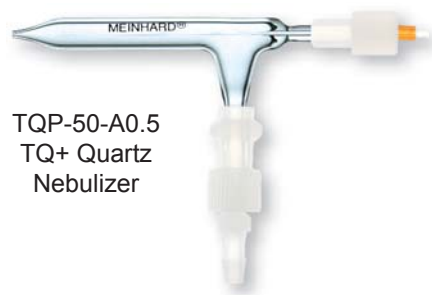


Tube-PVCSD-30-F  
2-stop PVC  
Pump Tubing



## Quartz Nebulizers

Description	Part Number
MEINHARD® SILQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1



TQP-50-A0.5  
TQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, high sensitivity, low cost, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1



TR-30-A1  
Type A Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler. Includes a quartz cyclonic spray chamber. (ES-4182-1118)	ME41821118



ME41821118  
PC<sup>3</sup> Peltier Cooler

## Quartz Torch Bonnet

Description	Part Number
Quartz bonnet for one-piece torches (319-311)	ML170025



ML170025  
Quartz Torch Bonnet

### Quartz One-Piece Torches with Ball Joint

Description	Part Number
Quartz torch, axial, fixed 1.5 mm injector (319-308)	ML170005
Quartz torch, axial, fixed 1.5 mm injector (rebuild of ML170005)	ML170005R
Quartz torch, axial, fixed 1.5 mm injector (3201192)	ML145005



ML170005  
Quartz One-Piece Torch

### Torches with Demountable Injector

Description	Part Number
Quartz torch, demountable, with 1 mm quartz injector in PFA base (ES-1223-0103-01)	ME1223010301
Quartz torch, demountable, with 1.5 mm quartz injector in PFA base (ES-1223-0153-02)	ME1223015302
Quartz torch, demountable, with 2 mm quartz injector in PFA base (ES-1223-0203-03)	ME1223020303
Quartz torch, demountable, with 1 mm sapphire injector in PFA base (ES-1203-0103-04)	ME1203010304
Quartz torch, demountable, with 1.5 mm sapphire injector in PFA base, RS12/5 adapter (ES-1202-1203)	ME12021203
Quartz torch, demountable, with 1.8 mm sapphire injector in PFA base (ES-1203-0183-06)	ME1203018306
Quartz torch, demountable, with 1.8 mm platinum injector in PFA base (ES-1212-0183-07)	ME1212018307
Quartz torch, demountable, with 2 mm platinum injector in PFA base (ES-1213-0203-08)	ME1213020308

### O-Ring-Free Sapphire Injectors, Demountable

Description	Part Number
O-ring-free sapphire injector, HF resistant, 1.0 mm (ES-1203-0100-82)	ME1203010082
O-ring-free sapphire injector, HF resistant, 1.8 mm (ES-1203-0180-82)	ME1203018082



ME1203018082  
O-ring-free Sapphire  
Injector

### O-Ring-Free Platinum Injectors, Demountable

Description	Part Number
O-ring-free platinum injector, HF resistant, 1.8 mm (ES-1213-0180-82)	ME1213018082
O-ring-free platinum injector, HF resistant, 2 mm (ES-1213-0200-82)	ME1213020082

### RS12/5 Socket to Torch Base PFA Adapter

Description	Part Number
PFA adapter from RS12/5 socket to ESI o-ring-free torch base (ES-5509)	ME5509



ME5509  
PFA Adapter

### Spray Chamber to RS12/5 Torch PFA Adapter

Description	Part Number
PFA adapter from ESI spray chamber to RS12/5 torch base (ES-5510)	ME5510



ME5510  
PFA Adapter

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

## Sampler Cones

Description	Part Number
Ni sampler Cone, Ni base (Version A) (319-285)	MC-19285
Ni sampler Cone, Ni base (Version B) (319-541)	MC-19541
Gasket, Graphite for sampler (pack of 3) (3004382)	MC-04382
Nickel sampler cone, original style (319-285)	Nu1001A-Ni
Nickel sampler cone, WA6, original style (319-497)	Nu100A4-Ni
Nickel sampler cone, version B with 0.9 mm orifice (319-541)	Nu1001B-Ni
Nickel sampler cone, version B (319-540)	Nu1004B-Ni



MC-19541  
Ni Sampler Cone

## Skimmer Cones

Description	Part Number
Ni skimmer Cone, Ni base (Original) (319-284)	MC-19284
Ni skimmer Cone, Ni base (Version A) (319-497)	MC-19497
Ni skimmer Cone, Ni base (Version B) (319-540)	MC-19540



MC-19540  
Ni Skimmer Cone

## Magnetic Sector Multipliers

Description	Part Number
ETP Magnetic Sector Multiplier, Nu Plasma	MC-AF143
ETP Magnetic Sector Multiplier, Nu Plasma AttoM (with filter)	MC-AF144

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50
2-stop PVC pump tubing, flared, 0.13 mm ID, (orange/black), 12 pc	Tube-PVCSD-051-F
2-stop PVC pump tubing, flared, 0.51 mm ID, (orange/yellow), 12 pc	Tube-PVCSD-20-F



Tube-PVCSD-20-F  
2-stop PVC  
Pump Tubing

# MEINHARD® SiIQ+

## High Purity Quartz ICPMS Nebulizer

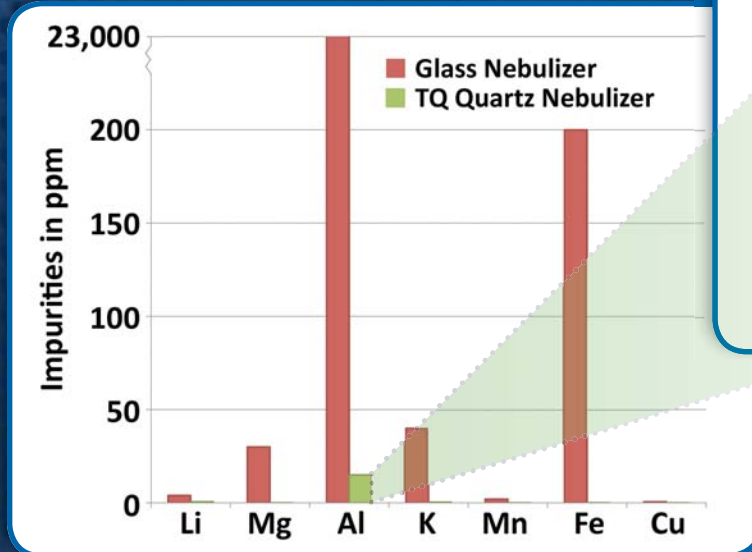
The SiIQ+ nebulizer by MEINHARD® is perfect for applications requiring high sensitivity. Made from the highest purity synthetic quartz, the SiIQ+ nebulizer has low levels of trace elemental impurities, reducing the risk of sample contamination. SiIQ+ nebulizers improve wash-out rates and generate low, stable blanks that can enhance ICPMS detection limits.

SiIQ+ comes equipped with PFA FitKit gas and sample quick connect fittings that eliminate contaminants from conventional connectors commonly used on other nebulizers. The fittings can be rapidly attached and removed. The gas quick connect creates a snug seal around the maria on the SiIQ+ sidearm.

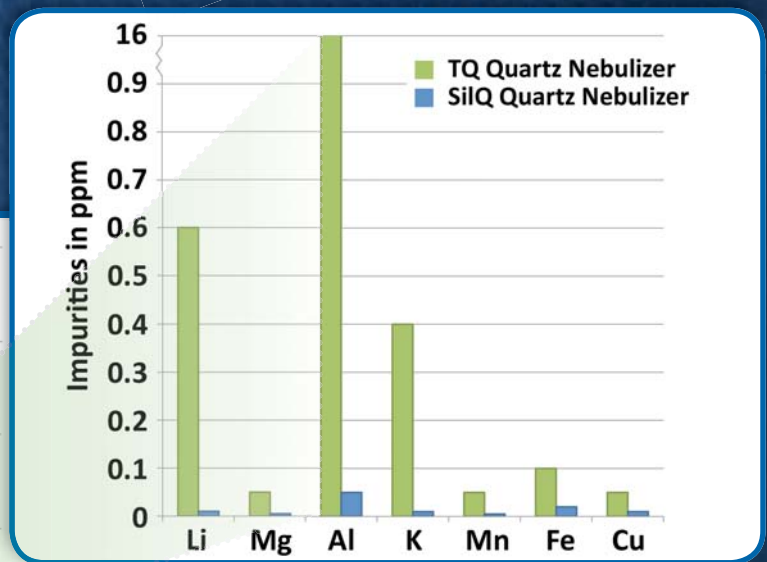
Each nebulizer is manufactured and tested to exacting specifications. The standard SiIQ+ nebulizer requires 50 psi for 1 L/min of argon carrier and 0.5 mL/min solution uptake. Other versions are available.



MEINHARD® SiIQ+ high purity nebulizer with PFA FitKit



**Comparison of metal impurity in Glass and TQ+ Quartz nebulizers.** Glass nebulizers have high levels of impurity for elements such as Al, Fe, K, Mg.

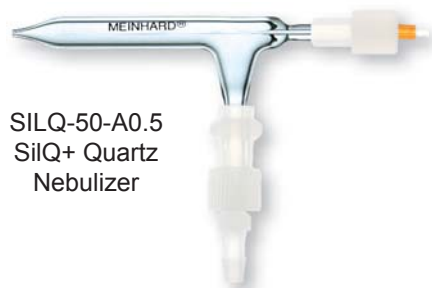


**Comparison of metal impurity in SiIQ+ and TQ+ Quartz nebulizers.** SiIQ+ impurities on average are 60 times lower than standard quartz nebulizers. Aluminum impurities in SiIQ+ nebulizers are more than 400,000 times lower than glass.



## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (N8122461)	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi	TQ-30-A3
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (N8145011)	TQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi (N8142098)	TQP-30-A0.5



SILQ-50-A0.5  
SiIQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi (N8102011)	TR-30-C1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 0.7 L/min @ 30 psi	TR-30-K1
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (N8145012)	TR-50-C0.5



TR-30-C1  
Type C Glass  
Nebulizer

## PFA Nebulizers with Integrated Capillaries

Description	Part Number
PFA-20 MicroFlow nebulizer, HF resistant, 20 µL/min uptake (ES-2020-0002)	ME20200002
PFA-100 MicroFlow nebulizer, HF resistant, 100 µL/min uptake (ES-2002-0002)	ME20020002



ME20200002  
PFA-20 Nebulizer

## PFA-ST Nebulizer

Description	Part Number
PFA-ST MicroFlow low pressure nebulizer for PE Elan/NexION ICPMS. Includes two capillaries (100µl/min. & 400µl/min.) (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

### Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

### PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

### Solution Inlet Adapter

Description	Part Number
Solution inlet adapter for 4 mm standard liquid input nebulizers, includes union, ferrules, and 5' of 1/16" o.d. Tefzel sample tubing and #160 (WE024372)	Fit Kit 3



Fit Kit 3  
Solution Inlet Adapter

### Quartz Torches, Demountable Injector

Description	Part Number
ESI precision o-ring-free quartz torch, demountable, axial (ES-1102-1000)	ME11021000
Quartz torch, demountable (N8122006)	ML140010
Quartz torch, demountable, high efficiency (W1008384)	ML140012



ME11021000  
Quartz Torch

### Quartz One-Piece Torch with Ball Joint

Description	Part Number
Quartz torch, fixed injector, long tube (N8102001)	ML140009



ML140009  
Quartz One-Piece Torch

### Alumina Injectors

Description	Part Number
Alumina injector, 0.85 mm (N8126039)	MA2186
Alumina injector, 1.5 mm (N8126040)	MA2185
Alumina injector, 2 mm (N8126041)	MA2184



MA2186  
Alumina Injector

### Quartz Injectors with Ball Joint

Description	Part Number
Quartz injector with ball joint, 0.85 mm, support ring (WE027030)	ML140031
Quartz injector with ball joint, 1.5 mm, support ring (WE027005)	ML140032
Quartz injector with ball joint, 2 mm, support ring (WE023948)	ML140030



ML140031  
Quartz Injector with  
Ball Joint

## Cyclonic Spray Chambers

Description	Part Number
Quartz cyclonic spray chamber for ball joint injector (WE025221)	ML140020
PE ELAN quartz cyclonic spray chamber for ball joint injector with Easy-Seal inlet (WE025221)	ML140020ES
PE NexION quartz cyclonic spray chamber for ball joint injector with Easy-Seal inlet (N8145013)	ML140025ESQ
PE NexION Pyrex cyclonic spray chamber for ball joint injector with Easy-Seal inlet	ML40026ESP



ML140025ESQ  
Cyclonic Spray Chamber

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc (N0680375)	Tube-PVCSD-30
2-stop PVC pump tubing, 0.95 mm ID, (white/black), 12 pc	Tube-PVCSD-37
2-stop PVC pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680375)	Tube-PVCSD-45
2-stop PVC pump tubing, flared, 0.76 mm ID, (black/black), 12 pc (00473550)	Tube-PVCSD-30-F



Tube-PVCSD-30  
2-stop PVC  
Pump Tubing

## 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 0.76 mm ID, (black/black), 12 pc (N0680376)	Tube-SolFSD-30
2-stop SolventFlex pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680376)	Tube-SolFSD-45
2-stop SolventFlex pump tubing, flared, 0.76 mm ID, (black/black), 12 pc (N8122012)	Tube-SolFSD-30-F



Tube-SolFSD-30  
2-stop SolventFlex  
Pump Tubing

### Sampling Cones

Description	Part Number
Ni sampler Cone, Ni base (W1033612)	MC-33612
Ni sampler Cone, Ni base (WE013087)	MC-13807
Ni sampler cone, Ni base (WE021140)	MC-21137
Pt sampler cone, Ni base (W1033614)	MC-33614
Pt sampler cone, Ni base (N8122025)	MC-22025
Pt sampler cone, Ni base (WE027802)	MC-27802
O-ring, brown Viton for sampler (qty5) (N8120511)	MC-20511
Gaskets, Aluminum for sampler (qty 3) (W1040148)	MC-40148



MC-33612  
Ni Sampler Cone

### Skimmer Cones

Description	Part Number
Al hyper skimmer cone, Al base (W1033995)	MC-33995
Ni skimmer cone, Ni base (W1026356)	MC-26356
Ni skimmer cone, Ni base (N8122000)	MC-22000
Ni skimmer cone, Ni base (WE021137)	MC-21137
Pt skimmer cone, Ni base (W1026907)	MC-26907
Pt skimmer cone, Ni base (N8122035)	MC-22035
Pt skimmer cone, Ni base (WE027803)	MC-27803
O-rings, black Viton for skimmer (qty 5) (N8120512)	MC-20512
O-rings, Viton for hyper skimmer (qty 2) (09902123)	MC-02123
Screws, steel for hyper skimmer (qty 2) (09919737)	MC-19737
Insertion / removal tool (WE17142)	MC-17142



MC-33995  
Al Hyper Skimmer Cone

### Electron Multipliers

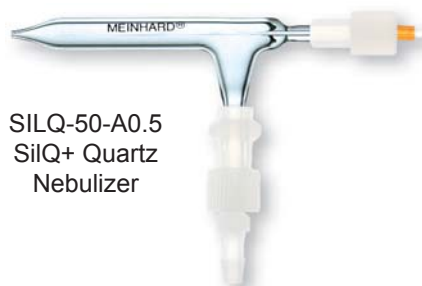
Description	Part Number
ETP Electron Multiplier, PE Elan 6000 (N812500)	MC-AF210
ETP Electron Multiplier, PE NexION (N8145000)	MC-45000
ETP Electron Multiplier, PE Elan 6X00/9000/DRC (N8125050)	MC-AF217



MC-AF210  
ETP Electron Multiplier

## Quartz Nebulizers

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (N8122461)	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi (WE024371)	TQ-30-A3



SILQ-50-A0.5  
SilQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi (00472020)	TR-30-A3
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 30 psi (N8102011)	TR-30-C3
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 0.7 L/min @ 30 psi (N0681574)	TR-30-K3
MEINHARD® Type C glass nebulizer, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi (N8145012)	TR-50-C0.5
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 50 psi (0047-2022)	TR-50-C1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 50 psi (N0777707)	TR-50-K1



TR-30-A3  
Type A Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
Burgener PEEK MiraMist parallel-path nebulizer. Includes an argon line and sample capillary. (N0775330)	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040-57)	ME204057



ME204057  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040-57)	ME404057



ME404057  
PolyPro-ST Nebulizer



### Solution Inlet Adapter

Description	Part Number
Solution inlet adapter for 4 mm standard liquid input nebulizers, includes union, ferrules, and 5' of 1/16" o.d. Tefzel sample tubing and #160 (WE024372)	Fit Kit 3



Fit Kit 3  
Solution Inlet Adapter

### F0 Encapsulated Micro Tubing

Description	Part Number
F0 Encapsulated micro tubing for low uptake rates from 0.1 to 0.5 mL/min and the lowest internal volume of any nebulizer. Includes 0.25 mm i.d. ■ (green marker) 70 cm long micro capillary.	F0-25



F0-25  
F0 Encapsulated Micro Tubing

### F1 Detachable Capillary

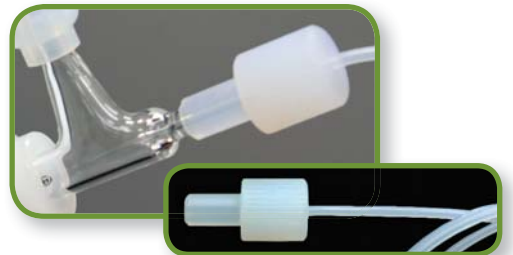
Description	Part Number
F1 Detachable capillary for a wide range of applications. Includes 0.80 mm i.d. ■ (blue marker) 70 cm long capillary.	F1-80



F1-80  
F1 Detachable Capillary

### F2 Standard PFA Integrated Capillary

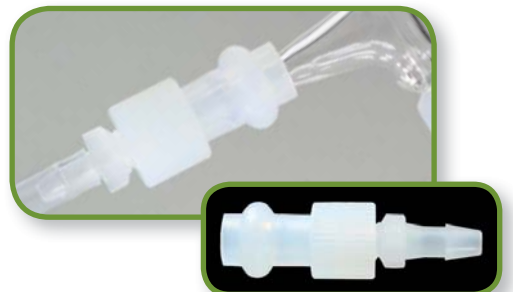
Description	Part Number
F2 Standard integrated capillary for self-aspiration or pumping. Includes 0.5 mm i.d. ■ (orange marker) 70 cm long capillary.	F2-50



F2-50  
F2 Integrated Capillary

### FG Gas Quick Connect for MEINHARD® Nebulizers

Description	Part Number
FG Gas Quick Connect for MEINHARD® Nebulizers with maria for both small bore and standard bore nebulizers.	FG



FG  
FG Gas Quick Connect

## Nebulizer Tubing Clamp

Description	Part Number
Nebulizer gas tubing clamp (N0777460)	Snapper 1.251

## O-Ring Kit

Description	Part Number
O-ring kit for GemTip Nebulizer, pack of 4	MM21045

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

## pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids Accessory

## Pyrex Spray Chamber

Description	Part Number
Pyrex spray chamber "Scott" Type, barrel (0047-2047)	ML135012



ML135012  
Pyrex Spray Chamber

## Pyrex Cyclonic Spray Chambers

Description	Part Number
Cyclonic spray chamber 2x00/4x00/5x00DV, baffled, Unifit (included) (N0776053)	ML130020
ML130020 with Easy-Seal threaded nebulizer inlet and Teflon® PFA cap	ML130020ES
Cyclonic Spray Chamber 2x00/4x00/5x00DV, No Baffle, Unifit (Included). Suits all Optima types from the 2x00 up to the 8x00. (N0776052)	ML130021
ML130021 with Easy-Seal threaded nebulizer inlet and Teflon® PFA cap	ML130021ES
Cyclonic Spray Chamber, 2x00/4x00/5x00DV, Baffle, o-rings	ML130022
Cyclonic Spray Chamber, 4x00/5x00V, Baffle, Top Socket, Unifit (included)	ML130023
Cyclonic Spray Chamber 2x00/4x00/5x00DV, 4 mm Baffle (organics), Unifit	ML130031
ML130031 with Easy-Seal threaded nebulizer inlet and Teflon® PFA cap	ML130031ES



ML130022  
Cyclonic  
Spray Chamber

### Unifit Adapter

Description	Part Number
Unifit adapter, 6 mm glass concentric nebulizer to 12 mm inlet port (218080256)	ML130024



ML130024  
Unifit Adapter

### PC<sup>3</sup> Peltier Cooler Kit

Description	Part Number
PC <sup>3</sup> Peltier cooler. Includes a quartz cyclonic spray chamber and PFA-ST nebulizer. (ES-4190-57-29)	ME41905729



ME41905729  
PC<sup>3</sup> Peltier Cooler

### PC<sup>3</sup>-LT Peltier Cooler Kit

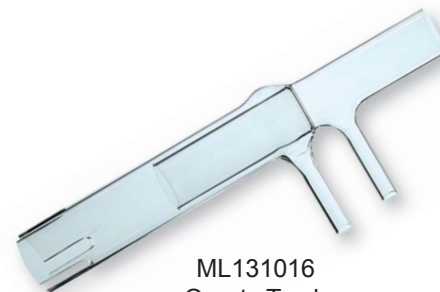
Description	Part Number
PC <sup>3</sup> -LT Peltier cooler, reaches -20° C. Includes a quartz cyclonic spray chamber and PFA-ST nebulizer. (ES-9190-57-29)	ME91905729



ME91905729  
PC<sup>3</sup>-LT Peltier Cooler

### Quartz Torch

Description	Part Number
Quartz torch, 4000V, 3 slots (N0771500)	ML131016



ML131016  
Quartz Torch

### Quartz Torch Tubes

Description	Part Number
Quartz torch tube, 2000/4000/5000 DV, short, organics (N0770344)	ML131017
Quartz torch tube, 2000/4000/5000 DV, no slot (N0770343)	ML131019
Quartz torch tube, 2000/4000/5000 DV, 1 slot, ES-1402-4000 (N0770338)	ML131020
Quartz torch tube, 2000/4000/5000 DV, 3 slots (N0772005)	ML131021
Optima 8000 torch, 1 slot (N0780130)	ML131050
Optima 8000 torch, 3 slots (N0780132)	ML131052
Optima 8000 torch, organics, No slot (N0780133)	ML131053



ML131021  
Quartz Torch Tube

## Quartz Bonnet

Description	Part Number
Quartz Bonnet for 2000/4000 Series (N0775289)	ML131025



ML131025  
Quartz Bonnet

## Quartz Injectors

Description	Part Number
Quartz Injector, 0.8mm, 2000/4000 (N0775225)	ML131040
Quartz Injector, 1.2mm, 2000/4000 (N0775226)	ML131041
Quartz Injector, 1.6mm, 2000/4000 (N0775223)	ML131042
Quartz Injector, 2.0mm, 2000/4000 (N0775014)	ML131043
Quartz Injector, 3.0mm, 2000/4000 (N0775224)	ML131044



ML131042  
Quartz Injector

## Alumina Injectors

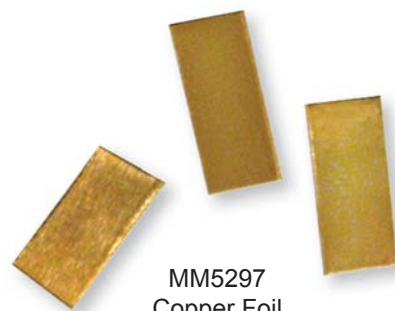
Description	Part Number
Alumina Injector, 1.2 mm, Optima 2000V/4000V/5000V (N0771531)	MA1531
Alumina Injector, 2.0mm, Optima 2000/4000/5000, DV (N0775177)	MA5177
Alumina Injector, 0.80mm, 2000/4000/5000 DV (N0775227)	MA5227
Alumina Injector, 1.2mm, 2000/4000/5000 DV (N0775228)	MA5228
Alumina Injector, 2.0mm, 3000XL, 3x00DV, 4300V, 5300V (N0695362)	MA5362
Alumina Injector, 1.2mm, 2000/4000/5000 DV (N0776093)	MA6093



MA1531  
Alumina Injector

## Copper Foil

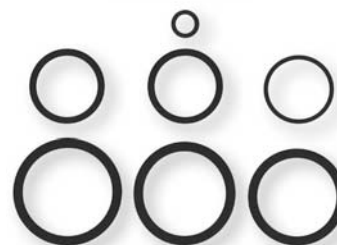
Description	Part Number
Copper foil, Optima 2000/4000/5000 torch, 24 pieces (N0775297)	MM5297



MM5297  
Copper Foil

## O-Ring Kit

Description	Part Number
O-ring Kit for Optima 2000/4000/5000, pack of 6 (N0770437)	MM770437



MM770437  
O-ring Kit

### Axial Purge Windows

Description	Part Number
Axial purge window, Optima 3000 DV, 4000, 5000, 7000 DV (B0066549)	MP6549
Axial purge window, Optima 4x00/5x00 (N0771116)	MP1116



MP6549  
Axial Purge Window

### Radial Purge Window

Description	Part Number
Radial purge window, Optima 4x00DV/5x00DV (N0770322)	MP770322



MP770322  
Radial Purge Window

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc (09908587)	Tube-PVCSD-30
2-stop PVC pump tubing, flared, 0.76 mm ID, (black/black), 12 pc	Tube-PVCSD-30-F
2-stop PVC pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680375)	Tube-PVCSD-45



Tube-PVCSD-30  
2-stop PVC  
Pump Tubing

### 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 0.76 mm ID, (black/black), 12 pc (00473550)	Tube-SolFSD-30
2-stop SolventFlex pump tubing, flared, 0.76 mm ID, (black/black), 12 pc	Tube-SolFSD-30-F
2-stop SolventFlex pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680376)	Tube-SolFSD-45



Tube-SolFSD-30  
2-stop SolventFlex  
Pump Tubing



## Quartz Nebulizers

Description	Part Number
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 L/min @ 30 psi (WE024371)	TQ-30-A3



TQ-30-A3  
Type A Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi (00472020)	TR-30-A3
MEINHARD® Type C glass nebulizer, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-C0.5
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 30 psi (N8102011)	TR-30-C3
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 0.7 L/min @ 30 psi (N0681574)	TR-30-K3
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 50 psi (0047-2022)	TR-50-C1
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TRP-30-A0.5



TR-30-A3  
Type A Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
Burgener PEEK MiraMist parallel-path nebulizer. Includes an argon line and sample capillary. (N0775330)	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040-57)	ME204057



ME204057  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040-57)	ME404057



ME404057  
PolyPro-ST Nebulizer

### Solution Inlet Adapter

Description	Part Number
Solution inlet adapter for 4 mm standard liquid input nebulizers, includes union, ferrules, and 5' of 1/16" o.d. Tefzel sample tubing and #160 (WE024372)	Fit Kit 3



Fit Kit 3  
Solution Inlet Adapter

### F0 Encapsulated Micro Tubing

Description	Part Number
F0 Encapsulated micro tubing for low uptake rates from 0.1 to 0.5 mL/min and the lowest internal volume of any nebulizer. Includes 0.25 mm i.d. ■ (green marker) 70 cm long micro capillary.	F0-25



F0-25  
F0 Encapsulated Micro Tubing

### F1 Detachable Capillary

Description	Part Number
F1 Detachable capillary for a wide range of applications. Includes 0.80 mm i.d. ■ (blue marker) 70 cm long capillary.	F1-80



F1-80  
F1 Detachable Capillary

### F2 Standard PFA Integrated Capillary

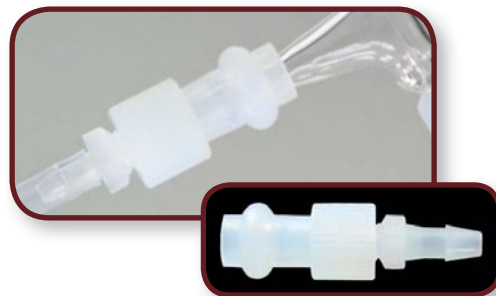
Description	Part Number
F2 Standard integrated capillary for self-aspiration or pumping. Includes 0.5 mm i.d. ■ (orange marker) 70 cm long capillary.	F2-50



F2-50  
F2 Integrated Capillary

### FG Gas Quick Connect for MEINHARD® Nebulizers

Description	Part Number
FG Gas Quick Connect for MEINHARD® Nebulizers with maria for both small bore and standard bore nebulizers.	FG



FG  
FG Gas Quick Connect

## Nebulizer Tubing Clamp

Description	Part Number
Nebulizer gas tubing clamp (N0777460)	Snapper 1.251

## O-Ring Kit

Description	Part Number
O-ring kit for GemTip Nebulizer, pack of 4	MM21045

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

## pergo Nebulizer Gas Humidifier

Description	Part Number
<i>pergo</i> argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
<i>pergo</i> argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
*pergo* High Solids Accessory

## Unifit Adapter

Description	Part Number
Unifit adapter, 6 mm glass concentric nebulizer to 12 mm inlet port (218080256)	ML130024



ML130024  
Unifit Adapter

## Pyrex Cyclonic Spray Chambers

Description	Part Number
Cyclonic glass spray chamber, Optima 3000DV, 3000XL (N812-2188)	ML130019XL
Cyclonic glass spray chamber, Optima 3000 RL, SCR	ML130019



ML130019  
Cyclonic Spray Chamber

### PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier-thermostatted quartz spray chamber, with PFA-ST nebulizer (ES-4190-57V-29)	ME419057V29



ME419057V29  
PC<sup>3</sup> Peltier Cooler

### Drain Line

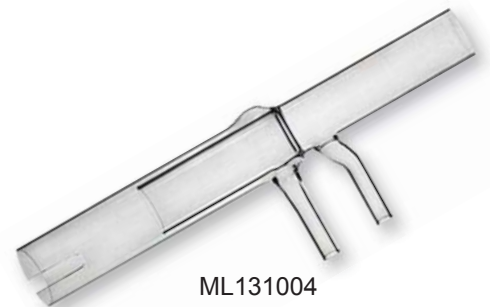
Description	Part Number
Threaded drain line for spray chamber, PharMed, 0,75mm x 1m	ME20440002



ME20440002  
Threaded Drain Line

### Quartz Torches

Description	Part Number
Quartz Torch Tube, 3 slots, 138mm, Optima 3000 RL	ML131001
Quartz Torch Tube, 1 slot, 138mm, Optima 3000 RL (N0690568)	ML131004
Quartz Torch Tube, no slot, 125mm, Optima 3000 RL	ML131005
Optima 3x00DV Quartz Torch, 2-slot	ML131012
Optima 3x00DV Quartz Torch Tube, 1-slot (NO69-1662)	ML131014
Optima 3x00DV Quartz Torch Tube, 3-slot	ML131015



ML131004  
Quartz Torch

### Quartz Bonnets

Description	Part Number
Quartz bonnet for 3000 Axial/DV (N0691664)	ML131031
Quartz bonnet for 3000 (after 9/21/94) (N0695456)	ML131032
Quartz bonnet for 3000 RL (before 9/21/94) (N0695295)	ML131033



ML131031  
Quartz Bonnet

## O-Ring Kit

Description	Part Number
O-ring kit for Optima 3000XL/DV, packet of 9 (N0690769)	MM690769



MM690769  
O-ring Kit

## Quartz Injectors

Description	Part Number
Quartz injector, 2.0mm, 3x00 XL and 3000 RL (N0695441)	ML132040
Quartz injector, 2.0 mm, 3x00 XL / DV, L=83mm (N0695442)	ML132041
Quartz injector, 1.6mm, 3x00 XL / DV, L=83mm (N0695449)	ML132044
Quartz injector, 1.2 mm, Optima 3000 XL/DV, 4300V, 5300V (N0695460)	ML130046



ML132041  
Quartz Injector

## Alumina Injectors

Description	Part Number
Alumina Injector, Optima 3x00 XL/DV ID=2.0, L=83mm (N0695362)	MA5362
Alumina Injector, Optima 3x00 RL, ID=2.0. Also N8126039 (N0582186)	MA2186



MA2186  
Alumina Injector

## Radial Purge Windows

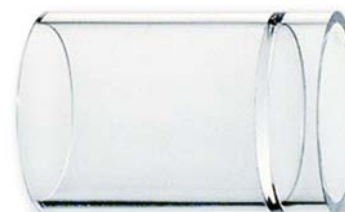
Description	Part Number
Quartz Radial purge window, Optima 3000R, 3000 SCR, 3000 RL, 4x00V, 5x00V (N0581497)	MP1497
Quartz Radial purge window, Optima 3000 DV - short tube (N0690672)	MP0672



MP0672  
Radial Purge Window

## Axial Purge Window

Description	Part Number
Quartz Axial purge window, Optima 3000 DV - long tube (N0691689)	MP1689



MP1689  
Axial Purge Window



### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc (09908587)	Tube-PVCSD-30
2-stop PVC pump tubing, flared, 0.76 mm ID, (black/black), 12 pc	Tube-PVCSD-30-F
2-stop PVC pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680375)	Tube-PVCSD-45



Tube-PVCSD-30  
2-stop PVC  
Pump Tubing

### 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 0.76 mm ID, (black/black), 12 pc (00473550)	Tube-SolFSD-30
2-stop SolventFlex pump tubing, flared, 0.76 mm ID, (black/black), 12 pc	Tube-SolFSD-30-F
2-stop SolventFlex pump tubing, 1.14 mm ID, (red/red), 12 pc (N0680376)	Tube-SolFSD-45



Tube-SolFSD-30  
2-stop SolventFlex  
Pump Tubing

## Quartz Nebulizer

Description	Part Number
MEINHARD® Type C concentric quartz nebulizer, polished, recessed (0.5 mm) capillary, low background, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-C1



TQ-30-C1  
Quartz Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1
MEINHARD® Type C glass nebulizer, 1 mL/min, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi (046-00092-02)	TR-30-C1



TR-30-A1  
Type A Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

### Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

### Cyclonic Spray Chambers

Description	Part Number
Pyrex cyclonic spray chamber, top socket, baffled, 4 mm drain, o-rings	ML151026
Pyrex cyclonic spray chamber, top socket, baffled with Easy-Seal threaded nebulizer inlet and PFA cap	ML151026ES
Quartz cyclonic spray chamber, baffled, top socket, 4 mm drain, o-rings	ML151026Q
Pyrex cyclonic spray chamber, top socket, no baffle, 4 mm drain, o-rings	ML151027
Pyrex cyclonic spray chamber, top socket, no baffle with Easy-Seal threaded nebulizer inlet and PFA cap	ML151027ES
Quartz cyclonic spray chamber, top socket, no baffle, 4 mm drain, o-rings	ML151027Q



ML151027  
Pyrex Cyclonic  
Spray Chamber

### PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler. Includes a quartz cyclonic spray chamber. (ES-4190-95-29)	ME41909529



ME41909529  
PC<sup>3</sup> Peltier Cooler

### PC<sup>3</sup>-LT Peltier Cooler

Description	Part Number
PC <sup>3</sup> -LT Peltier cooler, reaches -20° C. Includes a quartz cyclonic spray chamber. (ES-9190-95-29)	ME91909529



ME91909529  
PC<sup>3</sup>-LT Peltier Cooler

## Quartz One-Piece Torches with Ball Joint

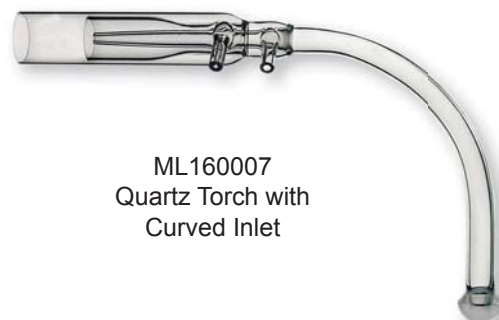
Description	Part Number
Quartz torch, radial, fixed 1.5 mm injector, long tube (20470272)	ML160005
Quartz mini torch, fixed injector (21181448)	ML160008



ML160008  
Quartz Mini Torch

## Quartz One-Piece Torch with Curved Inlet

Description	Part Number
Quartz torch with curved inlet to tapered injector, axial, fixed injector, long tube (21146605)	ML160007



ML160007  
Quartz Torch with  
Curved Inlet

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.64 mm ID, (orange/white), 12 pc	Tube-PVCSD-25
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc	Tube-PVCSD-40
2-stop PVC pump tubing, flared, 0.64 mm ID, (orange/white), 12 pc	Tube-PVCSD-25-F



Tube-PVCSD-40  
2-stop PVC  
Pump Tubing

## 3-Stop PVC Peristaltic Pump Tubing

Description	Part Number
3-stop PVC pump tubing, 0.89 mm ID, (orange/orange/orange), 12 pc	Tube-PVCSD-35-3
3-stop PVC pump tubing, 1.14 mm ID, (red/red/red), 12 pc	Tube-PVCSD-45-3
3-stop PVC pump tubing, flared, 0.89 mm ID, (orange/orange/orange), 12 pc	Tube-PVCSD-35-3-F



Tube-PVCSD-35-3  
3-stop PVC  
Pump Tubing



### apex Q - Quartz Inlet System.

Features a quartz, o-ring-free flow path for high sensitivity, low background and rapid rinse-out of samples that do not contain hydrofluoric acid.

### apex IR for Isotope Ratio Analysis.

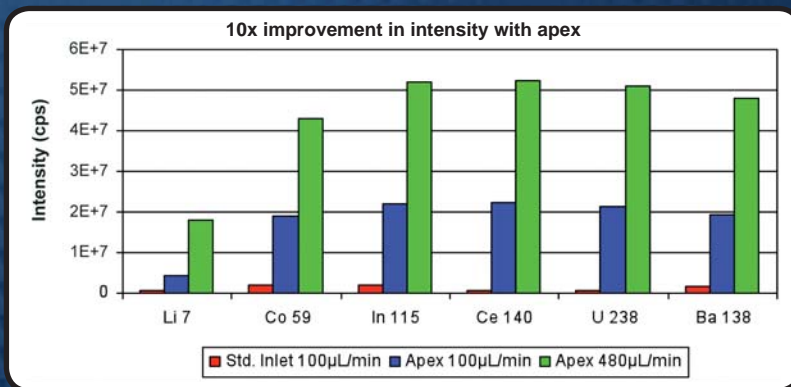
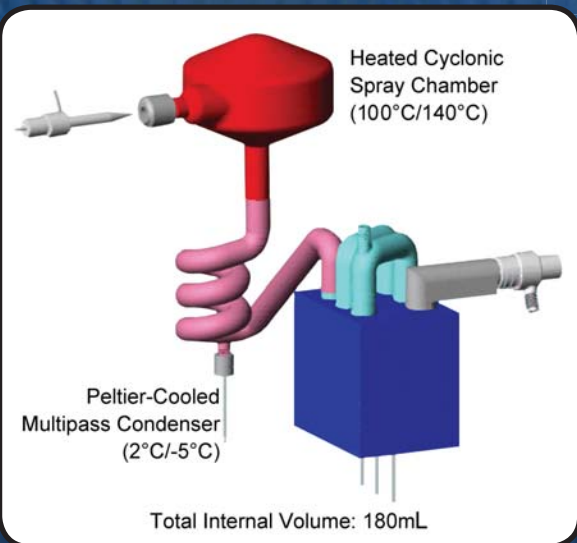
Developed for isotope ratio analysis, the apex IR has a quartz flow path and includes an additional mixing chamber that further homogenizes and stabilizes the sample aerosol stream, resulting in a more stable signal.

### apex HF for Hydrofluoric Acid Resistance.

Uses a high purity, o-ring-free PFA flow path for the introduction of samples containing hydrofluoric acid. The apex HF is recommended for many geochemical and semiconductor applications.

apex IR

apex Q



Preset dual temperature settings for heater and cooler. Patented flow path design ensures rapid wash in / washout.

## Quartz Nebulizer

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5



SILQ-50-A0.5  
SilQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1L/min @ 30 psi	TR-30-A1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 mL/min @ 30 psi	TR-30-K2



TR-30-K2  
Type C Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizers

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040
PFA MicroFlow high solids large bore nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2030)	ME2030



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### Liquid Inlet Fitting

Description	Part Number
Liquid inlet fitting and argon tubing with quick disconnect for TR-30-C1	MM175100



MM175100  
Liquid Inlet  
Fitting

### Double Pass Spray Chamber

Description	Part Number
Large double pass spray chamber, end-on plasma (EOP) (48105051)	ML175019



ML175019  
Double Pass Spray  
Chamber

### Cyclonic Spray Chambers

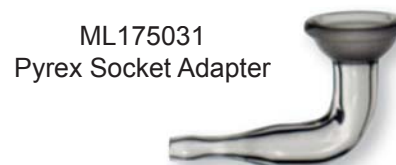
Description	Part Number
Cyclonic spray chamber, top socket, pump drain (48105001)	ML175026
Cyclonic spray chamber, top socket, pump drain with Easy Seal threaded inlet and Teflon® PFA cap	ML175026ES
Cyclonic spray chamber, end-on plasma (EOP), pump drain (48105061)	ML175026EOP
Cyclonic spray chamber, top socket, pump drain with Easy-Seal threaded inlet and Teflon® PFA Cap	ML175026EOP-ES
Quartz Cyclonic Spray Chamber, Socket	ML175026Q
Quartz Cyclonic Spray Chamber, Jacketed, Threaded Ports (USA00850)	ML175026QJ
Quartz Cyclonic Spray Chamber for PC <sup>3</sup> Peltier cooler (ES-3167-1011)	ME31671011



ML175026EOP  
Cyclonic Spray  
Chamber

### 12/5 Socket Adapter

Description	Part Number
Pyrex adapter, 12/5 socket, female, 45 mm for ICP (48105011)	ML175031



ML175031  
Pyrex Socket Adapter

### PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler for Spectro EOP. Includes a quartz cyclonic spray chamber. (ES-4167-1011)	ME41671011



ME41671011  
PC<sup>3</sup> Peltier Cooler

## pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

## PFA Spray Chamber Kit

Description	Part Number
HF resistant PFA spray chamber kit. Includes high sample flow PFA spray chamber with barbed exit port, polypropylene adapter for Spectro cross-flow nebulizer, ES-2100-2479 drain line, fittings, PFA barbed connector and 25 cm long tygon tubing 1/4" i.d. (ES-2100-2477)	ME21002477



ME21002477  
PFA Spray Chamber Kit

## PFA Spray Chamber

Description	Part Number
47 mm HF resistant PFA spray chamber with PFA PureCap endcap with additional gas port (ES-2256-5470)	ME22565470



ME22565470  
47 mm PFA Spray Chamber

## Quartz Injectors, Demountable

Description	Part Number
Quartz injector, 1.5 mm (48105008)	ML175021
Quartz injector, 1.8 mm (48105010)	ML175022
Quartz injector, 2.5 mm (48105009)	ML175023



ML175021  
Quartz Injector

## Sapphire Injectors, Demountable

Description	Part Number
Sapphire injector, HF resistant, 1.5 mm (ES-1980-0150)	ME19800150
Sapphire injector, HF resistant, 1.8 mm (ES-1980-0180)	ME19800180
Sapphire injector, HF resistant, 2.5 mm (ES-1980-0250)	ME19800250



ME19800180  
Sapphire Injector



### Quartz One-Piece Torches with Sheath Gas

Description	Part Number
Quartz torch, end-on plasma (EOP), Axial, with sheath gas, fixed 3.2 mm injector (75260533)	ML175047
Quartz torch, end-on plasma (EOP), Axial, with sheath gas, fixed 2.5 mm Injector (75160537)	ML175048
Quartz torch, end-on plasma (EOP), Axial, with sheath gas, fixed 1.8 mm Injector (75160549)	ML175049



ML175049  
Quartz Torch with  
1.8 mm Injector

### Quartz Torch, Demountable Injector

Description	Part Number
Quartz torch, end-on plasma (EOP), Axial, demountable with flare, 80 mm Length (ES-1702-EOP)	ME1702EOP



ME1702EOP  
Quartz Torch

### Quartz One-Piece Torches

Description	Part Number
Quartz torch, end-on plasma (EOP), Axial, flared end, fixed 2.5 mm injector (48105052)	ML175040
Quartz torch, end-on plasma (EOP), Axial, flared end, fixed 2.2 mm injector (48105051)	ML175041
Quartz torch, end-on plasma (EOP), Axial, flared end, fixed 1.8 mm injector (48105052A)	ML175042



ML175040  
Quartz Torch with  
2.5 mm Injector

### Quartz Non-Flared Torch, Demountable Injector

Description	Part Number
Quartz torch, end-on plasma (EOP), Axial, demountable no flare, 80 mm Length (48206007)	ML175044



ML175044  
Quartz Torch,  
Non-Flared



## Tubing and Gas Connectors

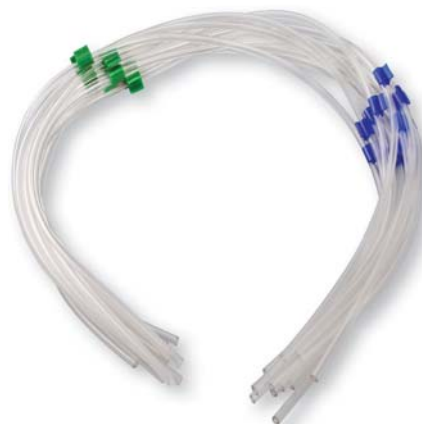
Description	Part Number
Tubing and gas connectors (44302072 & 44302077)	MM175055



MM175055  
Tubing and Gas Connectors

## Peristaltic Pump Tubing

Description	Part Number
2-stop Tygon pump tubing, 0.38 mm ID, 151 mm bridge distance (orange/green), 12 pc (47201037)	Tube-PVCSD-15
2-stop Tygon pump tubing, 1.75 mm ID, 151 mm bridge distance (orange/orange), 12 pc (47101003)	Tube-PVCSD-35
2-stop Tygon pump tubing, 1.30 mm ID, 151 mm bridge distance (grey/grey), 12 pc (47501010)	Tube-PVCSD-50
2-stop Tygon pump tubing, 1.75 mm ID, 151 mm bridge distance (blue/green), 12 pc (47101005)	Tube-PVCSD-69



Tube-PVCSD-69  
1.75 mm Pump  
Tubing

## Flared Peristaltic Pump Tubing

Description	Part Number
2-stop Tygon pump tubing, 0.38 mm ID, 2.0 mm flared (orange/green), 12 pc (4720137)	Tube-PVCSD-15-F
2-stop Tygon pump tubing, 0.89 mm ID, 2.0 mm flared, 151 mm bridge distance (orange/orange), 12 pc (47101003)	Tube-PVCSD-35-F
2-stop Tygon pump tubing, 1.30 mm ID, 2.0 mm flared, 151 mm bridge distance (grey/grey), 12 pc (47501010)	Tube-PVCSD-50-F



Tube-PVCSD-35-F  
2.0 mm Flared  
Pump Tubing

# PC<sup>3</sup>

## PC<sup>3</sup> Peltier Cooled Cyclonic Spray Chamber

The PC<sup>3</sup> is a small, robust Peltier cooled cyclonic spray chamber. The PC<sup>3</sup> offers the advantages of low memory effects, constant temperature, fast rinse-out and high sample transport efficiency. The cooled outer walls of the PC<sup>3</sup> spray chamber enhance long-term signal stability, reduce polyatomic interferences such as oxides and reduce solvent loading when volatile organic solvents are analyzed.



PC<sup>3</sup> Peltier Cooled Cyclonic Spray Chamber

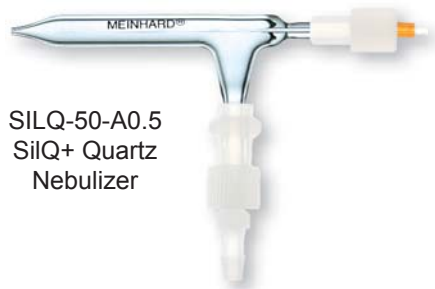
- Two preset temperatures +2°C and -5°C
- Ideal for analysis of aqueous or aqueous/organic mixtures
- Low memory effects
- Constant temperature
- Fast rinse-out
- High sample transport efficiency

***Enhanced Long-Term Signal Stability!***

**E  
S  
I** **Elemental Scientific**

## Quartz Nebulizer

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5



SILQ-50-A0.5  
SilQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1
MEINHARD® Type C glass nebulizer, 1 mL/min, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi (76060510)	TR-30-C1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 L/min @ 30 psi	TR-30-K2



TR-30-K2  
Type C Glass  
Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## PFA Nebulizers

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040
PFA MicroFlow high solids large bore nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2030)	ME2030



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

### Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### Liquid Inlet Fitting

Description	Part Number
Liquid inlet fitting and argon tubing with quick disconnect for TR-30-C1	MM175100



MM175100  
Liquid Inlet Fitting

### Spray Chambers

Description	Part Number
Spray chamber, slurry	ML175010
Spray chamber, upward conical open (48105003)	ML175012
Spray chamber, large double pass (48105006)	ML175014
Spray chamber, large, double pass, jacketed, threaded ports (48106008)	ML175018



ML175014  
Double Pass  
Spray Chamber

### Cyclonic Spray Chambers

Description	Part Number
Cyclonic spray chamber, top socket, pump drain (48105001)	ML175026
Cyclonic spray chamber, top socket, pump drain with Easy Seal threaded inlet and Teflon® PFA cap	ML175026ES
Quartz Cyclonic Spray Chamber, Socket	ML175026Q
Quartz Cyclonic Spray Chamber, Jacketed, Threaded Ports (USA00850)	ML175026QJ
Quartz Cyclonic Spray Chamber for PC <sup>3</sup> Peltier cooler (ES-3167-1001)	ME31671001



ML175026  
Cyclonic Spray Chamber

## PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler for Spectro SOP. Includes a quartz cyclonic spray chamber. (ES-4167-1011)	ME41671011



ME41671011  
PC<sup>3</sup> Peltier Cooler

## pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

## PFA Spray Chamber Kit

Description	Part Number
HF resistant PFA spray chamber kit. Includes high sample flow PFA spray chamber with barbed exit port, polypropylene adapter for Spectro cross-flow nebulizer, ES-2100-2479 drain line, fittings, PFA barbed connector and 25 cm long tygon tubing 1/4" i.d. (ES-2100-2477)	ME21002477



ME21002477  
PFA Spray Chamber Kit

## PFA Spray Chamber

Description	Part Number
47 mm HF resistant PFA spray chamber with PFA PureCap endcap with additional gas port (ES-2256-5470)	ME22565470



ME22565470  
47 mm PFA Spray Chamber



### Quartz One-Piece Torches

Description	Part Number
Quartz torch, Spectroflame, fixed injector 1.8 mm (75060596)	ML175005
Quartz torch, Spectroflame, fixed injector 2.5 mm	ML175008
Quartz torch, Spectroflame, radial, fixed injector 1.0 mm (48205001)	ML175007



ML175005  
Quartz Torch

### Quartz Torches, Demountable Injector

Description	Part Number
Quartz torch, side-on plasma (SOP), Axial, demountable, no flare, 100 mm length (ES-1702-SOP)	ME1702SOP
Quartz torch, radial, demountable, 80 mm Length (75060545)	ML175006
Quartz torch, organic, does not include gas fittings (75360521)	ML175009



ME1702SOP  
Quartz Torch

### Quartz Non-Flared Torch, Demountable Injector

Description	Part Number
Quartz torch, end-on plasma (SOP), demountable no flare, 100 mm Length (48206002)	ML175043



ML175043  
Quartz Torch,  
Non-Flared

### Quartz Injectors, Demountable

Description	Part Number
Quartz injector, 1.5 mm (48105008)	ML175021
Quartz injector, 1.8 mm (48105010)	ML175022
Quartz injector, 2.5 mm (48105009)	ML175023



ML175021  
Quartz Injector

### Sapphire Injectors, Demountable

Description	Part Number
Sapphire injector, HF resistant, 1.5 mm (ES-1980-0150)	ME19800150
Sapphire injector, HF resistant, 1.8 mm (ES-1980-0180)	ME19800180
Sapphire injector, HF resistant, 2.5 mm (ES-1980-0250)	ME19800250



ME19800180  
Sapphire Injector

## Tubing and Gas Connectors

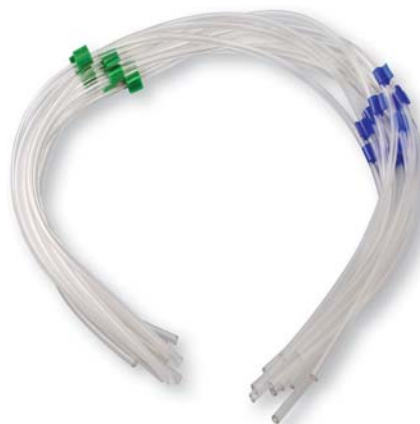
Description	Part Number
Tubing and gas connectors (44302072 & 44302077)	MM175055



MM175055  
Tubing and Gas Connectors

## Peristaltic Pump Tubing

Description	Part Number
2-stop Tygon pump tubing, 1.30 mm ID, 151 mm bridge distance (grey/grey), 12 pc (47501010)	Tube-PVCSD-50
2-stop Tygon pump tubing, 1.75 mm ID, 151 mm bridge distance (blue/green), 12 pc (47101005)	Tube-PVCSD-69



Tube-PVCSD-69  
1.75 mm Pump  
Tubing

## Flared Peristaltic Pump Tubing

Description	Part Number
2-stop Tygon pump tubing, 0.38 mm ID, 2.0 mm flared (orange/green), 12 pc (47201037)	Tube-PVCSD-15-F
2-stop Tygon pump tubing, 0.89 mm ID, 2.0 mm flared, 151 mm bridge distance (orange/orange), 12 pc (47101003)	Tube-PVCSD-35-F
2-stop Tygon pump tubing, 1.30 mm ID, 2.0 mm flared, 151 mm bridge distance (grey/grey), 12 pc (47501010)	Tube-PVCSD-50-F



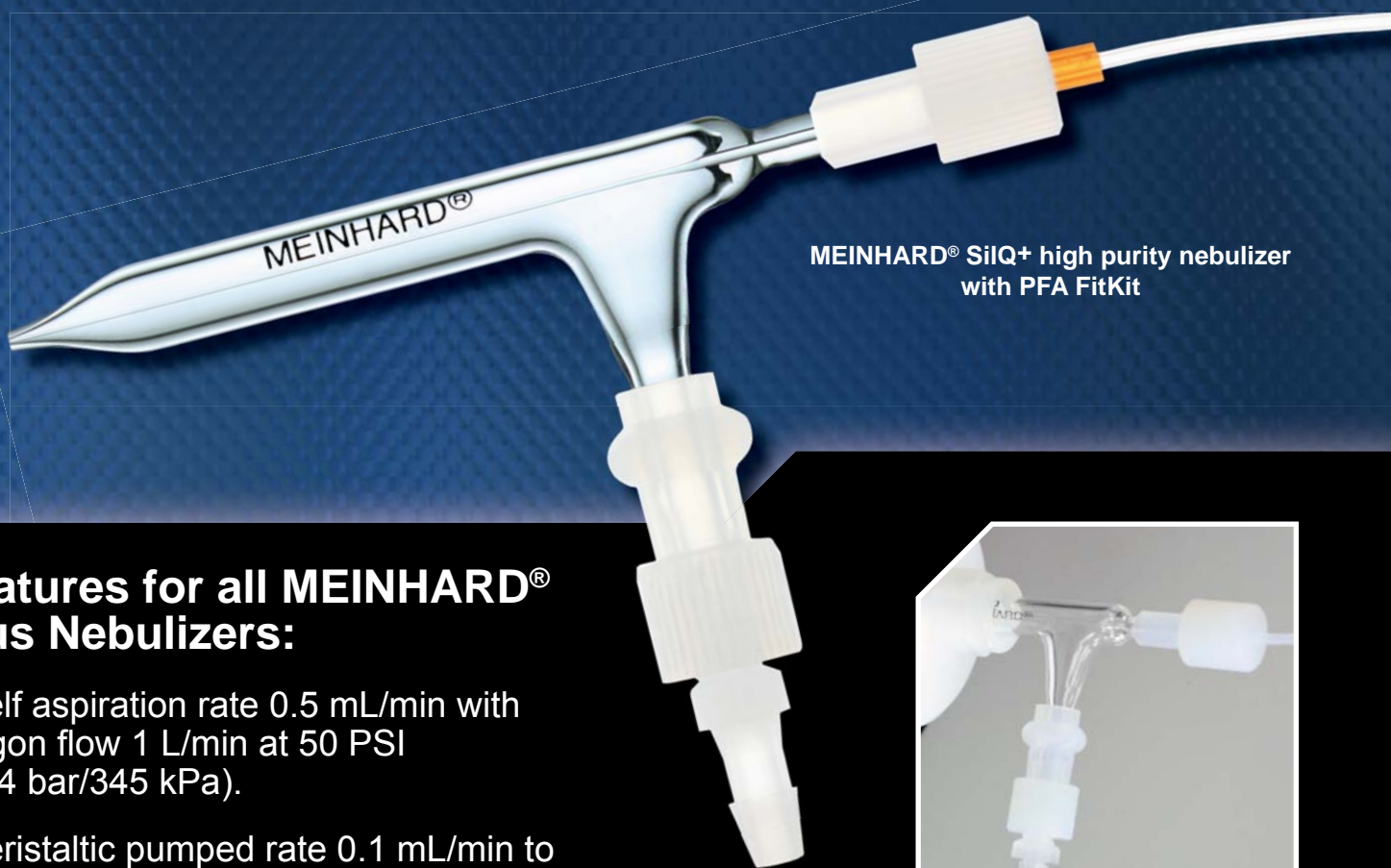
Tube-PVCSD-35-F  
2.0 mm Flared  
Pump Tubing

# PLUS NEBULIZERS

## with PFA FitKit Quick Connects

MEINHARD® Plus Nebulizers have the lowest dead volume of any glass or quartz nebulizer. The low dead volume and high sensitivity provide excellent detection limits and washout.

Each MEINHARD® Plus nebulizer comes with the FitKit+ gas and sample quick connect fittings. The connections are made with high-purity PFA, minimizing the chance of contamination during backflow events. The gas connection fits snugly over the maria on the sidearm of the nebulizer.



MEINHARD® SiIQ+ high purity nebulizer with PFA FitKit

### Features for all MEINHARD® Plus Nebulizers:

- Self aspiration rate 0.5 mL/min with argon flow 1 L/min at 50 PSI (3.4 bar/345 kPa).
- Peristaltic pumped rate 0.1 mL/min to 3.0 mL/min.
- Includes FG Gas Quick Connect (PFA) and F2 Quick Connect with 0.5 mm i.d. ■ (orange marker) capillary, 70 cm.



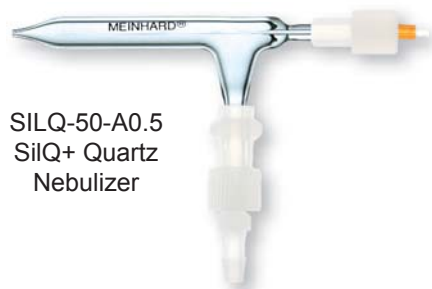
*Enhance Your Detection Limits,  
Reduce Sample Contamination*



**Elemental  
Scientific**

## Quartz Nebulizers

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 2 mL/min, 1 L/min @ 30 psi	TQ-30-A2
MEINHARD® Type C concentric quartz nebulizer, polished, recessed (0.5 mm) capillary, low background, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-C1



SILQ-50-A0.5  
SilQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type C glass nebulizer, 1 mL/min, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 1 L/min @ 30 psi	TR-30-C2
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 mL/min @ 30 psi	TR-30-K2
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 0.7 L/min @ 30 psi	TR-30-K3



TR-30-C2  
Type A Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

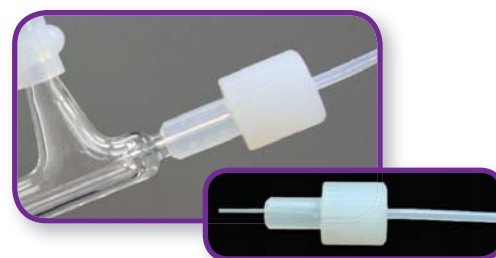
Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## F0 Encapsulated Micro Tubing

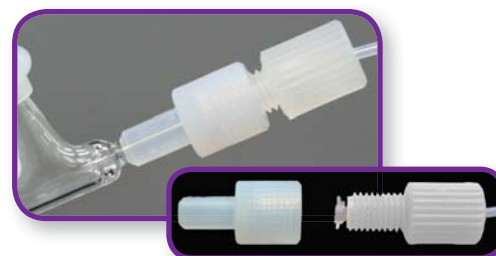
Description	Part Number
F0 Encapsulated micro tubing for low uptake rates from 0.1 to 0.5 mL/min and the lowest internal volume of any nebulizer. Includes 0.25 mm i.d. ■ (green marker) 70 cm long micro capillary.	F0-25



F0-25  
F0 Encapsulated Micro Tubing

## F1 Detachable Capillary

Description	Part Number
F1 Detachable capillary for a wide range of applications. Includes 0.80 mm i.d. ■ (blue marker) 70 cm long capillary.	F1-80

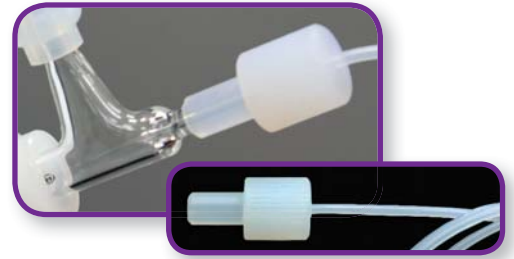


F1-80  
F1 Detachable Capillary



### F2 Standard PFA Integrated Capillary

Description	Part Number
F2 Standard integrated capillary for self-aspiration or pumping. Includes 0.5 mm i.d. ■ (orange marker) 70 cm long capillary.	F2-50



F2-50  
F2 Integrated Capillary

### FitKit 3T

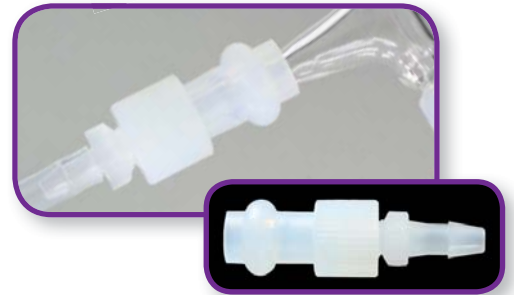
Description	Part Number
FitKit F5 for standard MEINHARD® nebulizer, standard integrated capillary, 0.50 mm ID (orange marker) x 70 cm PTFE	F5-50



F5-50  
FitKit F5

### FG Gas Quick Connect for MEINHARD® Nebulizers

Description	Part Number
FG Gas Quick Connect for MEINHARD® Nebulizers with maria for both small bore and standard bore nebulizers.	FG



FG  
FG Gas Quick Connect

### Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory



## Spray Chambers

Description	Part Number
Pyrex Scott Type spray chamber, radial (120-3751)	ML155025
Pyrex Scott Type spray chamber, axial (318-00049)	ML155055



ML155025  
Pyrex Spray Chamber

## Cyclonic Spray Chambers

Description	Part Number
Cyclonic spray chamber, radial, o-rings for 6 mm nebulizer (120-00475-2)	ML155053
Pyrex cyclonic spray chamber, radial, o-rings for 6 mm nebulizer (120-00475-1)	ML155054
Pyrex cyclonic spray chamber for Hildebrand Grid, axial (120-00461-2)	ML155058
Cyclonic spray chamber for Hildebrand Grid, with baffle, axial (120-00461-1)	ML155059



ML155059  
Cyclonic Spray Chamber

## Quartz One-Piece Torches with Ball Joint

Description	Part Number
Quartz torch, axial, fixed 2.5 mm injector, 187 mm length (318-00062)	ML155062
Quartz torch, axial, direct-reading echelle, aqueous, 160 mm length (318-00064)	ML155064
Quartz torch, dual view direct-reading echelle, aqueous (318-00065)	ML155065
Quartz torch, dual view, DURA (120-00496-1)	ML155066
Quartz torch, radial, fixed 1.5 mm injector (does not include tubing and fittings) (120-00336-1)	ML155020
Quartz torch, radial, fixed 1.0 mm injector (does not include tubing and fittings) (120-00336-2)	ML155022
Quartz torch, axial, direct-reading echelle, aqueous, fixed 2.5 mm injector (does not include tubing and fittings) (120-00336-3)	ML155023



ML155064  
Quartz One-Piece Torch

## Quartz Torches, Demountable Injector

Description	Part Number
Quartz torch, axial, demountable, direct-reading echelle (318-00069)	ML155069
Quartz torch, axial, demountable, dual view direct-reading echelle (318-00070)	ML155070
Quartz torch, radial, demountable (318-0001)	ML155043



ML155070  
Quartz Torch

## Tubing and Quick Disconnects

Description	Part Number
PVC tubing and quick disconnects for Leeman torch	MM155100

### Purge Tubes

Description	Part Number
Purge tube, axial, DV Profile (318-00066)	MP155066
Purge tube, radial, DV Profile (318-00067)	MP155067
Purge tube, radial, Profile (318-00068)	MP155068



MP155067  
Purge Tube

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, flared, 0.51 mm ID, (orange/yellow), 12 pc (309-00069-1)	Tube-PVCSD-20-F
2-stop PVC pump tubing, flared, 0.76 mm ID, (black/black), 12 pc (309-00069-7)	Tube-PVCSD-30-F
2-stop PVC pump tubing, flared, 1.14 mm ID, (red/red), 12 pc (309-00069-4)	Tube-PVCSD-45-F



Tube-PVCSD-20-F  
2-stop PVC  
Pump Tubing

### 2-Stop SolventFlex Peristaltic Pump Tubing

Description	Part Number
2-stop SolventFlex pump tubing, 0.51 mm ID, (orange/yellow), 12 pc (309-00069-2)	Tube-SolFSD-20
2-stop SolventFlex pump tubing, 0.76 mm ID, (black/black), 12 pc (309-00069-8)	Tube-SolFSD-30
2-stop SolventFlex pump tubing, 1.14 mm ID, (red/red), 12 pc (309-00069-5)	Tube-SolFSD-45



Tube-SolFSD-30  
2-stop SolventFlex  
Pump Tubing

### 2-Stop Viton Peristaltic Pump Tubing

Description	Part Number
2-stop Viton pump tubing, 0.51 mm ID, (orange/yellow), 12 pc (309000693)	Tube-Viton-20
2-stop Viton pump tubing, 1.14 mm ID, (red/red), 12 pc (309000696)	Tube-Viton-45



Tube-Viton-20  
2-stop Viton Pump Tubing

## Quartz Nebulizers

Description	Part Number
MEINHARD® SiQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi (1110720)	TQ-30-A1
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQ-50-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 50 psi	TQ-50-A1



TQ-30-A1  
Type A Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TR-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 50 psi	TR-50-A1
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-A1



TR-50-A1  
Type A Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### Quartz Collar / Insulator

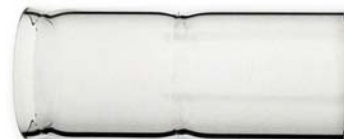
Description	Part Number
Quartz collar / insulator, 25 mm (ES-1001-0001)	ML185026



ML185026  
Quartz Collar / Insulator

### Quartz Collar / Sleeve

Description	Part Number
Quartz collar / sleeve, 60 mm (1136500)	ML185025



ML185025  
Quartz Collar / Sleeve

### Quartz One-Piece Torches

Description	Part Number
Quartz torch, 1.0 mm fixed injector	ML185006
Quartz torch, 1.5 mm fixed injector (ES-1002-0001)	ML185007
Quartz torch, 2.0 mm fixed injector	ML185008



ML185007  
Quartz Torch with  
1.5 mm Injector

### Quartz Torches, Demountable Injector

Description	Part Number
Quartz torch, axial, demountable (1091250)	ML185010
Quartz torch, Type CD, axial, demountable (ES-1002)	ME1002



ML185010  
Quartz Torch

### O-Ring-Free Quartz Torch

Description	Part Number
O-ring-free quartz torch, axial, demountable (ES-1002-1000)	ME10021000



ME10021000  
O-ring-free Quartz Torch

### Torch Shields / Screens

Description	Part Number
Pt guard / shield torch (1125680)	MC-25680
Platinum torch guard shield, 84 mm, platinum ring diameter 20 mm (1126640)	MC-26640



MC-26640  
Platinum Torch Shield

# Thermo Element 1, 2, XR & Neptune

## Quartz Extension

Description	Part Number
Quartz extension	ML185033

## Quartz Injectors with O-Ring Ball Joint

Description	Part Number
Quartz injector with o-ring ball joint, 1.0 mm (does not include adapter) (1130680)	ML185040
Quartz injector with o-ring ball joint, 1.5 mm (does not include adapter)	ML185041
Quartz injector with o-ring ball joint, 1.8 mm (does not include adapter) (1122800)	ML185042
Quartz injector with o-ring ball joint, 2.0 mm (does not include adapter)	ML185043



ML185041  
Quartz Injector

## Jacketed Spray Chamber

Description	Part Number
Quartz spray chamber, jacketed for coolant, threaded port connections (1120900)	ML185018



ML185018  
Jacketed Spray Chamber

## pergo Nebulizer Gas Humidifier

Description	Part Number
<i>pergo</i> argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
<i>pergo</i> argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
*pergo* High Solids Accessory



## Sampling Cones

Description	Part Number
Ni Jet sampler cone (1260630)	MC-60630
Ni sample cone, Nicone TM, Cu base (3600812)	MC-00812
Ni sampler cone (100% Ni) (1044530)	MC-44530
Al sampler cone (100% Al) (1044530-Al)	MC-44530-Al
Pt sampler, Ni core (1067501)	MC-67501
Pt sampler cone (3601289)	MC-01289
Gasket, graphite for sampler, pack of 3 (3004382)	MC-04382
Gasket, graphite for sampler, holes, 3 pk (67.0109.00)	MC-10900



MC-60630  
Nickel Sampler Cone

## Skimmer Cones

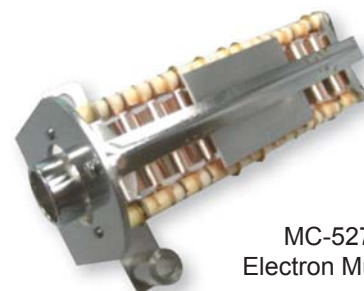
Description	Part Number
Ni skimmer cone (1067600)	MC-67600
Al skimmer cone (1067600-Al)	MC-67600-Al
Ni skimmer cone, insert ready (1311870)	MC-11870
Ni X skimmer cone (1142160)	MC-42160
Pt skimmer cone, insert ready (1324540)	MC-24540
Pt X skimmer, 6mm (1142150)	MC-42150



MC-42160  
Nickel Skimmer Cone

## Electron Multipliers

Description	Part Number
ETP Electron Multiplier, Thermo Element II (1114170)	MC-14170
ETP Magnetic Sector Multiplier, Thermo MAT 262, Neptune, Triton	MC-AF150HM9
MasCom Electron Multiplier, Thermo Element II (post 03/2004) (1152700)	MC-52700
ETP Electron Multiplier, Thermo Element I (1022600)	MC-22600



MC-52700  
Electron Multiplier

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50
2-stop PVC pump tubing, flared, 0.13 mm ID, (orange/black), 12 pc	Tube-PVCSD-051-F
2-stop PVC pump tubing, flared, 0.51 mm ID, (orange/yellow), 12 pc	Tube-PVCSD-20-F



Tube-PVCSD-20-F  
2-stop PVC  
Pump Tubing

## Glass Nebulizers

Description	Part Number
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 mL/min @ 30 psi (842312051431)	TR-30-K2
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 2 mL/min, 1 L/min @ 50 psi	TR-50-A2
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 2 mL/min, 1 L/min @ 50 psi (842312051331)	TR-50-C2



TR-30-K2  
Type C Glass  
Nebulizer

## V-Groove Nebulizer

Description	Part Number
V-Groove nebulizer, Noordermeer, 6 mm o.d., 30 psi (824312051321)	MP080963



MP080963  
V-Groove Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer (842312051471). Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01



PRG-01  
pergo High Solids Accessory

### Cyclonic Spray Chambers

Description	Part Number
iCAP 6x00 Pyrex cyclonic spray chamber, no baffle (842312051411)	ML128010
iCAP 6x00 Pyrex cyclonic spray chamber, no baffle with Easy-Seal threaded nebulizer inlet and PFA cap	ML128010ES
iCAP 6x00 Pyrex cyclonic spray chamber, baffled (842312051311)	ML128012
iCAP 6x00 Pyrex cyclonic spray chamber, baffled, with Easy-Seal threaded nebulizer inlet and PFA cap	ML128012ES



ML128010  
Cyclonic Spray Chamber

### Right Angle Spray Chamber Adapter

Description	Part Number
Right angle spray chamber adapter for iCAP 6x00 and Duo (842312051251)	ML128021



ML128021  
Right Angle Adapter

### Straight Spray Chamber Adapter

Description	Part Number
Straight spray chamber adapter for iCAP 6x00, radial, (842312051151)	ML128020



ML128020  
Straight Adapter

### Internal Liquid Fitting

Description	Part Number
Internal liquid fitting for spray chamber drain	MP500QD

# Thermo iCAP 6300, 6500, DUO & Radial

## Quartz Torches, Demountable Injector

Description	Part Number
Duo quartz torch for iCAP 6x00 (842312051241)	ML128007
EMT duo quartz torch for iCAP 6x00 (842312051841)	ML128050
Quartz EMT torch for iCAP 6x00, radial (842312051741)	ML128052
Quartz torch for iCAP 6x00, radial (842312051141)	ML128005



ML128050  
Quartz Torch

## Quartz Center Tubes

Description	Part Number
Quartz 1.0 mm center tube for iCAP 6x00 (842312051341)	ML128040
Quartz 1.5 mm center tube for iCAP 6x00 (842312051351)	ML128041
Quartz 2.0 mm center tube for iCAP 6x00 (842312051371)	ML128042
Quartz 1.0 mm center tube for iCAP 6x00, EMT (842312051941)	ML128070
Quartz 1.5 mm center tube for iCAP 6x00, EMT (842312051951)	ML128071
Quartz 2.0 mm center tube for iCAP 6x00, EMT (842312051971)	ML128072



ML128040  
Quartz Center Tube

## Torch Bonnet

Description	Part Number
Torch bonnet for iCAP Duo, radial (842312051591)	ML128073



ML128073  
Torch Bonnet

## 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 0.64 mm ID, (orange/white), 12 pc (842312051511)	Tube-PVCSD-25
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc (842312051521)	Tube-PVCSD-40
2-stop PVC pump tubing, flared, 0.64 mm ID, (orange/white), 12 pc	Tube-PVCSD-25-F



Tube-PVCSD-40  
2-stop PVC  
Pump Tubing

## 3-Stop PVC Peristaltic Pump Tubing

Description	Part Number
3-stop PVC pump tubing, 0.89 mm ID, (orange/orange/orange), 12 pc (13017700)	Tube-PVCSD-35-3
3-stop PVC pump tubing, 1.14 mm ID, (red/red/red), 12 pc (13107701)	Tube-PVCSD-45-3
3-stop PVC pump tubing, flared, 0.89 mm ID, (orange/orange/orange), 12 pc	Tube-PVCSD-35-3-F



Tube-PVCSD-35-3  
3-stop PVC  
Pump Tubing

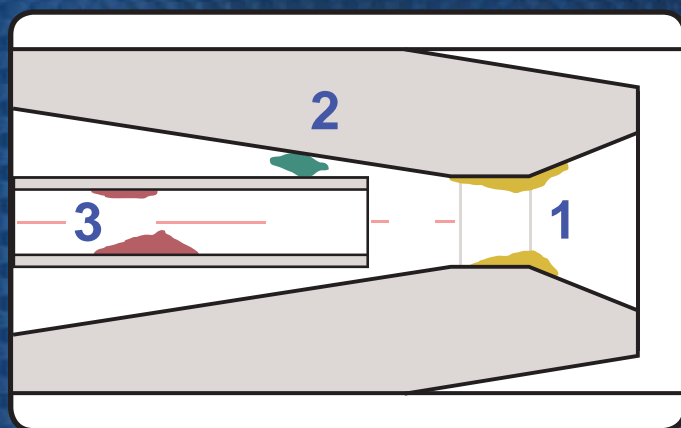


# Pearl Nebulizer Cleaner

For all quartz and glass concentric nebulizers

With this device a cleaning solution can be pumped manually in reverse, through both the sample and gas passages. Favorite cleaning solutions are - Sigma-Aldrich RBS-25 diluted about 20x, Deconex similarly diluted; - or - either of these, but with the addition of 10% methanol. When the wet-cleaning process is finished, rinse with DI water and flush dry with compressed air or inert gas.

The diagram below shows the 3 main types of blockages that can occur in pneumatic concentric nebulizers.



#1 - Deposits at this point are typically composed of salts coming out of solution. Such deposits can usually be removed by repeated rinsing of a concentric nebulizer with an appropriate solvent.

#2 - This sort of obstruction is the worst type, capable of breaking the tip of a glass capillary. If the deposit is insoluble, the only sure way to remove it is with a PEARL cleaner.

#3 - Deposits inside the capillary may go unnoticed for quite a while, particularly if the sample is pumped. Paper and textile fibers are often at fault.



PRL-01  
Pearl Nebulizer  
Cleaner



Using the PEARL cleaner



## Quartz Injectors

Description	Part Number
1.5 mm quartz injector (I73-Q15)	ME148015
2.0 mm quartz injector (I73-Q20)	ME148016
2.5 mm quartz injector (I73-Q25)	ME148017



ME148017  
Quartz Injector

## Sapphire Injectors

Description	Part Number
1.5 mm sapphire injector (I73-S15)	ME148051
1.8 mm sapphire injector (I73-S18)	ME148050
2.5 mm sapphire injector (I73-S25)	ME148052



ME148050  
Sapphire Injector

## Platinum Injectors

Description	Part Number
1.0 mm platinum injector (I73-P10)	ME148019
1.5 mm platinum injector (I73-P15)	ME148020
2.0 mm platinum injector (I73-P20)	ME148018



ME148018  
Platinum Injector

## Torch Holder

Description	Part Number
Torch Holder (1231000)	MC-31000



## Quartz Torch

Description	Part Number
Quartz torch (S011015)	ML148010



ML148010  
Quartz Torch

### Cyclonic Spray Chambers

Description	Part Number
Quartz cyclonic spray chamber (ES-3173-1111-23)	ML148030
PFA cyclonic spray chamber (ES-3173-3011-21)	ME148032

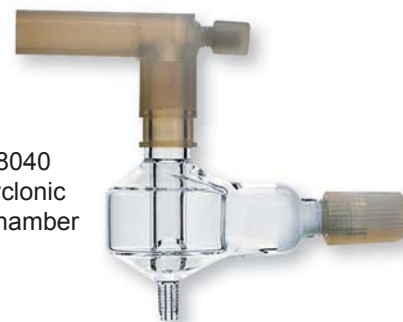


ME148032  
PFA Cyclonic Spray Chamber

### Mini Cyclonic Spray Chamber

Description	Part Number
Quartz mini-cyclonic spray chamber (20 mL) with baffle, EasySeal inlet, threaded drain. Outlet is right-angle Teflon® PFA with auxiliary gas inlet	ML148040

ML148040  
Mini Cyclonic Spray Chamber



### PFA Elbow

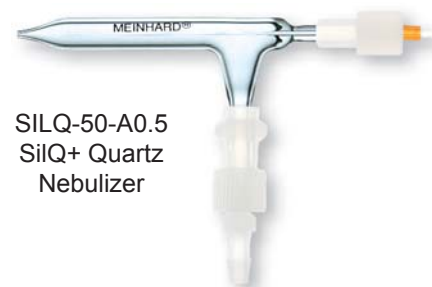
Description	Part Number
PFA elbow with add gas port (ES-3150-0073-L)	ME31500073L



ME31500073L  
PFA Elbow

### Quartz Nebulizers

Description	Part Number
MEINHARD® SilQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5



SILQ-50-A0.5  
SilQ+ Quartz Nebulizer

### Glass Nebulizers

Description	Part Number
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TR-50-A0.5
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5



TR-50-A0.5  
Glass Nebulizer

### PFA Nebulizers

Description	Part Number
MicroFlow PFA-ST nebulizer. Includes PFA gas line and two capillaries, 100 µl/min & 400 µl/min. (ES-2040-73)	ME204073
PFA-LC, MicroFlow PFA nebulizer, includes ES-2051-0150 150 µm i.d. Teflon® connection line, ES-2543 CTFE Union, ES-2045 0.15 mm capillary, and nebulizer gas fittings kit. (ES-2050-52)	ME205052



ME204073  
PFA-ST Nebulizer

## 3-Stop PVC Peristaltic Pump Tubing

Description	Part Number
3-stop PVC pump tubing, flared, 0.38 mm ID, (orange/green/orange), 12 pc (Q3PT-038-F-PVC)	Tube-PVCSD-15-3F
3-stop PVC pump tubing, 1.14 mm ID, (red/red/red), 12 pc (Q3PT-114-PVC)	Tube-PVCSD-45-3



## 3-Stop Santoprene Peristaltic Pump Tubing

Description	Part Number
3-stop santoprene pump tubing, 1.30 mm ID, (gray/gray/gray), 12 pc (Q3PT-130-PHR)	Tube-SanSD-51-3



## 3-Stop Silicone Peristaltic Pump Tubing

Description	Part Number
3-stop silicone pump tubing, 0.51 mm ID, (orange/yellow/orange), 12 pc (132070)	Tube-SilSD-20-3
3-stop silicone pump tubing, 0.76 mm ID, (orange/yellow/orange), 12 pc (132080)	Tube-SilSD-30-3
3-stop silicone pump tubing, 1.29 mm ID, (gray/gray/gray), 12 pc (132090)	Tube-SilSD-51-3
3-stop silicone pump tubing, 2.79 mm ID, (purple/white/purple), 12 pc (132100)	Tube-SilSD-110-3

## Sampling Cones

Description	Part Number
Ni sampler cone, Nicone TM, Cu base for iCAPQ and VG ExCell. (ES-3000-1221-C)	MC-00812
Pt sampler cone for Finnigan iCAPQ and VG all X. (ES-3000-1226)	MC-01289



## Skimmer Cones

Description	Part Number
Ni skimmer cone for iCAPQ, insert ready. (1311870)	MC-11870
Pt skimmer cone for iCAPQ, insert ready. (1324540)	MC-24540



MC-00812  
Ni Sampler Cone

### Sampling Cone Gasket

Description	Part Number
Graphite gasket for sampler cone with interface holes. 3 pack (ES-3000-1088)	MC-10900H



MC-10900H  
Sampling Cone Gasket

### Pump Oil

Description	Part Number
Pump oil PFPE 1000mL (1319310)	MC-19310

### Electron Multiplier

Description	Part Number
Electron multiplier (SEM) iCAP Q (1299710)	MC-99710

### Gas Line

Description	Part Number
Additional gas line (ES-2502-1000)	ME25021000



ME25021000  
Additional Gas Line

### Sample Capillaries

Description	Part Number
100 $\mu$ L/min self-aspirating sample capillary (ES-2042)	ME2042
400 $\mu$ L/min self-aspirating sample capillary (ES-2041)	ME2041



ME2042  
Sample Capillary

### Autosampler Probe

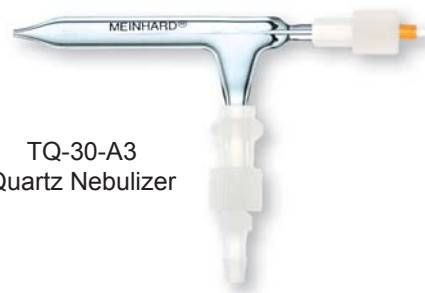
Description	Part Number
0.5mm ID Carbon fiber SC autosampler probe (ES-5037-3505-150)	ME50373505150



ME50373505150  
Autosampler Probe

## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi (1110720)	TQ-30-A1
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi	TQ-30-A3
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQ-50-A0.5



TQ-30-A3  
Quartz Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 1 mL/min, 1 L/min @ 30 psi (1201318)	TR-30-A1
MEINHARD® Type A glass nebulizer, lapped flush nozzle, low cost, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi (1040894)	TR-30-A3
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 3 mL/min, 1 L/min @ 30 psi	TR-30-C3



TR-30-A3  
Glass Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external 1/4-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers	PRL-01



PRL-01  
Pearl Nebulizer Cleaner



### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids  
Accessory

### Scott Spray Chamber

Description	Part Number
Quartz Scott spray chamber, jacketed for coolant (3200841)	ML145016



ML145016  
Scott Spray Chamber

### Quartz Couplings

Description	Part Number
Quartz coupling, ball/socket, 90° for Scott spray chamber (3200727)	ML145032
Quartz coupling, ball/socket, 17° (3600169)	ML145025



ML145032  
Quartz Coupling

### Conical Spray Chambers

Description	Part Number
Pyrex conical spray chamber, impact, jacketed (3204313)	ML145022
Quartz conical spray chamber, impact, jacketed (3600374)	ML145023
Quartz conical spray chamber, Peltier cooled (3600170)	ML145024
Quartz conical spray chamber, Peltier cooled, small drain (4600508)	ML145026



ML145023  
Conical Spray Chamber

### Cyclonic Spray Chamber

Description	Part Number
VG quartz cyclonic spray chamber (3600093)	ML145027

### Internal Liquid Fitting

Description	Part Number
Internal liquid fitting for spray chamber drain	MP500QD

## PC<sup>3</sup> Peltier Cooler

Description	Part Number
PC <sup>3</sup> Peltier cooler. Includes a quartz cyclonic spray chamber and PFA-ST nebulizer. (ES-4190-60-29)	ME41906029



ME41906029  
PC<sup>3</sup> Peltier Cooler

## PC<sup>3</sup>-LT Peltier Cooler

Description	Part Number
PC <sup>3</sup> -LT Peltier cooler, reaches -20° C. Includes a quartz cyclonic spray chamber and PFA-ST nebulizer. (ES-9190-60-29)	ME91906029



ME91906029  
PC<sup>3</sup>-LT Peltier Cooler

## Quartz One-Piece Torches with Ball Joint

Description	Part Number
Quartz torch with ball joint, axial, fixed 1.5 mm injector, 2 locator pins (3601145)	ML145050
Quartz torch, fixed 2 mm injector, 2 locator pins (3601147)	ME12030020
Quartz torch with ball joint, axial, fixed 1.5 mm injector, locator pin (3600969)	ML145011
Quartz torch with ball joint, axial, fixed 2 mm injector (3600791)	ML145012



ML145011  
Quartz One-Piece Torch

## Semi-Demountable Torch

Description	Part Number
Semi-demountable o-ring-free torch with sapphire injector, HF resistant (ES-1202-1203)	ME12021203

### Quartz Torches, Demountable Injector

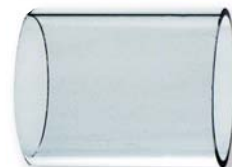
Description	Part Number
O-ring-free quartz torch with pin, demountable (3601146)	ML145051
Quartz torch, demountable, axial (3600970)	ML145010
ESI o-ring-free precision quartz torch, demountable, axial (ES-1202-0301)	ME12020301



ME12020301  
Quartz Torch

### Torch Bonnet

Description	Part Number
Torch bonnet for XSERIES 2 (3601149)	ML145053



ML145053  
Torch Bonnet

### Plasma Screen

Description	Part Number
Silver plasma screen for XSERIES 2 torch (3601219)	MC-01219



MC-01219  
Plasma Screen

### Electron Multiplier

Description	Part Number
MasCom Electron Multiplier, Thermo X-Series II (1244721)	MC-44721



MC-44721  
Electron Multiplier

### 2-Stop PVC Peristaltic Pump Tubing

Description	Part Number
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50
2-stop PVC pump tubing, 1.65 mm ID, (blue/blue), 12 pc	Tube-PVCSD-65
2-stop PVC pump tubing, flared, 0.38 mm ID, (orange/green), 12 pc	Tube-PVCSD-15-F
2-stop PVC pump tubing, flared, 0.51 mm ID, (orange/yellow), 12 pc	Tube-PVCSD-20-F



Tube-PVCSD-20-F  
2-stop PVC  
Pump Tubing

## Quartz Nebulizers

Description	Part Number
MEINHARD® SiIQ+ Ultra high purity quartz nebulizer, low internal volume, nominal uptake 0.5 mL/min, 1 mL/min @ 50 psi, with FG PFA gas fitting and F2 sample uptake line	SILQ-50-A0.5
MEINHARD® TQ+ quartz nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TQP-50-A0.5
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 0.5 mL/min, 1 L/min @ 30 psi	TQ-30-A0.5
MEINHARD® Type A quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TQ-30-A1
MEINHARD® Type A concentric quartz nebulizer, lapped flush nozzle, low background, high sensitivity, nominal uptake 3mL/min, 1 L/min @ 30 psi	TQ-30-A3



SILQ-50-A0.5  
SiIQ+ Quartz  
Nebulizer

## Glass Nebulizers

Description	Part Number
MEINHARD® TR+ glass nebulizer, high sensitivity, low internal volume inlet, nominal uptake 0.5 mL/min, 1 L/min @ 50 psi	TRP-50-A0.5
MEINHARD® Type A glass nebulizer, lapped flush nozzle, general purpose, nominal uptake 0.5mL/min, 1L/min @ 30 psi	TR-30-A0.5
MEINHARD® Type A glass nebulizer, low cost, lapped flush nozzle, high sensitivity, nominal uptake 1 mL/min, 1 L/min @ 30 psi (1201318)	TR-30-A1
MEINHARD® Type A glass nebulizer, low cost, lapped flush nozzle, high sensitivity, nominal uptake 3 mL/min, 1 L/min @ 30 psi (1040894)	TR-30-A3
MEINHARD® Type C glass nebulizer, polished, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 1 L/min @ 30 psi	TR-30-C1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, recessed (0.5 mm) capillary, high solids, nominal uptake 1 mL/min, 0.7 L/min @ 30 psi (1040894)	TR-30-K1
MEINHARD® Type K glass nebulizer, lapped flush nozzle, high solids, recessed (0.5 mm) capillary, nominal uptake 2 mL/min, 0.7 mL/min @ 30 psi	TR-30-K2



TR-30-K2  
Type K Glass  
Nebulizer

## PFA Nebulizer

Description	Part Number
MicroFlow PFA-ST self-aspirating nebulizer with external ¼-28 threaded connector. Includes one 400µl/min capillary. (ES-2040)	ME2040



ME2040  
PFA-ST Nebulizer

## Poly-Pro Nebulizer

Description	Part Number
PolyPro-ST self-aspirating nebulizer with external ¼-28 threaded connector. Includes one 400µl/min capillary. (ES-4040)	ME4040



ME4040  
PolyPro-ST Nebulizer

## PEEK Nebulizer

Description	Part Number
PEEK MiraMist nebulizer. Includes an argon line and sample capillary.	PMM4000



PMM4000  
PEEK MiraMist Nebulizer

## Nebulizer Cleaner

Description	Part Number
Pearl Nebulizer Cleaner for all quartz and glass concentric nebulizers (8100-2051)	PRL-01



PRL-01  
Pearl Nebulizer Cleaner

### pergo Nebulizer Gas Humidifier

Description	Part Number
pergo argon high solids accessory without nebulizer. Includes gas line connector kit.	PRG-01
pergo argon high solids accessory including MEINHARD® Type A Plus high performance nebulizer	PRG-01-MAPlus



PRG-01  
pergo High Solids  
Accessory

### Conical Spray Chamber

Description	Part Number
Pyrex conical spray chamber, impact, jacketed (3204313)	ML145022
Quartz conical spray chamber, impact, jacketed (3600374)	ML145023
Quartz conical spray chamber, Peltier cooled (3600170)	ML145024



ML145023  
Conical Spray Chamber

### Scott Spray Chamber

Description	Part Number
Quartz Scott spray chamber, jacketed for coolant (3200841)	ML145016



ML145016  
Scott Spray Chamber

### PFA Spray Chamber

Description	Part Number
35mm PFA spray chamber and PFA Purecap Endcap for PQ2, PQ3 & Axiom (ES-2124-5351)	ME21245351



ME21245351  
PFA Spray Chamber

### Spray Chamber Cooling Block

Description	Part Number
Spray chamber cooling block with mounting bracket (EP-6124-1002), anodized aluminum (ES-6124-0001)	ME61240001

### PQ2 Mounting Bracket for Cooling Block

Description	Part Number
Mounting bracket for aluminum spray chamber cooling block to VG PQ2 (ES-6124-1002)	ME61241002

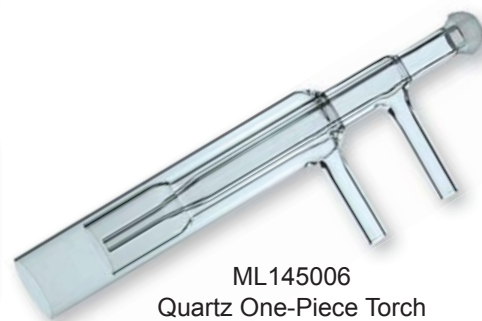


## Axiom Mounting Bracket for Cooling Block

Description	Part Number
Mounting bracket for aluminum spray chamber cooling block for VG Axiom (ES-6124-2002)	ME61242002

## Quartz One-Piece Torches with Ball Joint

Description	Part Number
Quartz torch with ball joint, axial, fixed 1.5 mm injector (3201192)	ML145005
Quartz torch with o-ring seal ball joint, axial, fixed 1.5 mm injector (319-308)	ML170005
Quartz torch with ball joint, axial, fixed 2 mm injector (3201732)	ML145006



ML145006  
Quartz One-Piece Torch

## Quartz Torches, Demountable Injector

Description	Part Number
Quartz torch, demountable, axial (1200080)	ML145008
ESI precision o-ring-free quartz torch, demountable, axial (ES-1202-0201)	ME12020201



ME12020201  
Quartz Torch

## Torch Bonnet

Description	Part Number
Quartz torch bonnet for Thermo PlasmaQuad/NU (319-311)	ML170025



ML170025  
Quartz Torch Bonnet

## Torch Shield

Description	Part Number
Quartz torch shield for Thermo PlasmaQuad (3203789 & 3600884)	ML145029



ML145029  
Quartz Torch Shield

## Quartz Elbows

Description	Part Number
Quartz elbow, ball/socket, 17° (3600169)	ML145025
Quartz elbow, ball/socket, 90° for Scott type quartz spray chamber (3200727)	ML145032



ML145032  
Quartz Elbow

## 2-Stop PVC Peristaltic Pump Tubing

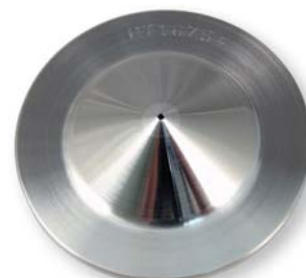
Description	Part Number
2-stop PVC pump tubing, 0.76 mm ID, (black/black), 12 pc (1301670)	Tube-PVCSD-30
2-stop PVC pump tubing, 1.02 mm ID, (white/white), 12 pc (1200212)	Tube-PVCSD-40
2-stop PVC pump tubing, 1.30 mm ID, (gray/gray), 12 pc	Tube-PVCSD-50
2-stop PVC pump tubing, 1.65 mm ID, (blue/blue), 12 pc	Tube-PVCSD-65
2-stop PVC pump tubing, 2.0 mm flared, 0.13 mm ID, (orange/black), 12 pc	Tube-PVCSD-051-F
2-stop PVC pump tubing, 2.0 mm flared, 0.38 mm ID, (orange/green), 12 pc (1301680)	Tube-PVCSD-15-F
2-stop PVC pump tubing, 2.0 mm flared, 0.51 mm ID, (orange/yellow), 12 pc (1305920)	Tube-PVCSD-20-F



Tube-PVCSD-30  
2-stop PVC  
Pump Tubing

## Sampling Cones

Description	Part Number
Ni sample cone (3004661)	MC-04661
Ni sample cone, Nicone TM, Cu base (3600812)	MC-00812
Ni sample cone (HPI) "supercone" (1600485)	MC-00485
Pt sample Cone (HP) "supercone" (1600335)	MC-00335
Pt sample Cone (6.35mm) HPI (3202521)	MC-02521
Pt sampler, Cu base (6.35mm) (1067500)	MC-67500
Pt sampler, Ni core (1067501)	MC-67501
Pt sampler cone (3601289)	MC-01289
Gasket, graphite for sampler, pack of 3 (3004382)	MC-04382
Gasket, graphite for sampler, holes, 3 pk (1310900)	MC-10900



MC-01289  
Platinum Sampler Cone

## Skimmer Cones

Description	Part Number
Ni micro-skimmer cone (3200860)	MC-00860
Ni skimmer cone, Nicone TM (3600811)	MC-00811
Pt micro-skimmer cone, XS (3201101)	MC-01101
Pt skimmer, Ni base (6mm) HPI (1047460)	MC-47460
Adapter, copper skimmer with screws (3600813)	MC-00813
O-ring, Viton for micro-skimmer, pack of 3 (1201240)	MC-01240



MC-47460  
Platinum Skimmer Cone

## Torch Shields / Screens

Description	Part Number
Platinum torch shield (3600157)	MC-00157
Silver torch screen (3601219)	MC-01219



MC-01219  
Silver Torch Screen

## Electron Multipliers

Description	Part Number
ETP Electron Multiplier, Thermo PQ3 Excel (simultaneous) (2203433)	MC-AF214
ETP Electron Multiplier, VG PQ3 Sequential (SXP Rods) (2203405)	MC-AF562A



MC-AF562A  
Electron Multiplier

# 2-Stop Peristaltic Pump Tubing Cross Reference Guide

Meinhard P/N	ESI P/N	Tubing Type	Color Code	Stops	ID (in)	ID (mm)	Qty	Agilent	JY - Horiba	PerkinElmer	Spectro Ametek	Teledyne	Thermo iCAP Elemental TJA	Thermo VG	Varian
Tube-PVCD-075-F	ES-4397-1019	PVC - Flared	ORG	RED	2	0.0075	0.19	12	G328067008		N0773111				
Tube-PVCD-075	ES-4398-1019	PVC	ORG	RED	2	0.0075	0.19	12	G182065220		N0695476				
Tube-PVCD-10-F	ES-4397-1027	PVC - Flared	ORG	BLU	2	0.0010	0.25	12	G328067047		N0773112				
Tube-PVCD-10	ES-4398-1013	PVC	ORG	BLU	2	0.0010	0.25	12			N0773117				
Tube-PVCD-15-F	ES-4397-1038	PVC- Flared	ORG	GRN	2	0.0150	0.38	12			N0777042			1301680	
Tube-PVCD-15	ES-4398-1038	PVC	ORG	GRN	2	0.0150	0.38	12			N0777110	47201037			
Tube-SolFSD-15	ES-4398-5038	Solva	ORG	GRN	2	0.0150	0.38	12			N8145211			1305910	
Tube-PVCD-173-F	ES-4397-1044	PVC - Flared	GRN	YEL	2	0.0173	0.44	12			N0773113				
Tube-PVCD-20-F	ES-4397-1051	PVC - Flared	ORG	YEL	2	0.0200	0.51	12			N0777476			1305920	
Tube-PVCD-20	ES-4398-1051	PVC	ORG	YEL	2	0.0200	0.51	12				309000691	1161920		
Tube-SolFSD-20	ES-4398-5051	Solva	ORG	YEL	2	0.0200	0.51	12				309000692			
Tube-Viton-20	ES-4398-7051	Viton	ORG	YEL	2	0.0200	0.51	12			N0777446	309000693			3710043500
Tube-PVCD-25-F	ES-4397-1064	PVC - Flared	ORG	WHT	2	0.0250	0.64	12			N0777711				
Tube-SanSD-25	ES-4398-2064	Santoprene	ORG	WHT	2	0.0250	0.64	12							
Tube-PVCD-25	ES-4398-1064	PVC	ORG	WHT	2	0.0250	0.64	12			N8122012	47101001	842312051511		
Tube-PVCD-30-F	ES-4397-1076	PVC - Flared	BLK	BLK	2	0.0300	0.76	12			N0777043			1301670	
Tube-SanSD-40	ES-4398-2076	Santoprene	BLK	BLK	2	0.0400	0.76	12							
Tube-PVCD-30	ES-4398-1076	PVC	BLK	BLK	2	0.0300	0.76	12	46.791.022	09908587		3093552			3710027200
Tube-SolFSD-30	ES-4398-5076	Solva	BLK	BLK	2	0.0300	0.76	12	46.791.010	00473550					3710034800
Tube-PVCD-35	ES-4398-1089	PVC	ORG	ORG	2	0.0350	0.89	12			47101003	3093551			
Tube-SolFSD-35	ES-4398-5089	Solva	ORG	ORG	2	0.0350	0.89	12			47501016	309000692			
Tube-PVCD-37	ES-4398-1095	PVC	WHT	BLK	2	0.0370	0.95	12	G182065220						
Tube-SanSD-15	ES-4398-2102	Santoprene	WHT	WHT	2	0.0400	1.02	12							
Tube-PVCD-40	ES-4398-1102	PVC	WHT	WHT	2	0.0400	1.02	12	G182065215	46.791.022			842312051521	1200212	3710034400
Tube-SolFSD-40	ES-4398-5102	Solva	WHT	WHT	2	0.0400	1.02	12							3710035000
Tube-SanSD-45	ES-4398-2114	Santoprene	RED	RED	2	0.0450	1.14	12			N0773119				
Tube-PVCD-45	ES-4398-1114	PVC	RED	RED	2	0.0450	1.14	12			N0680375	30900694			
Tube-SolFSD-45	ES-4398-5114	Solva	RED	RED	2	0.0450	1.14	12	46.791.012	N0680376		309000695			
Tube-SanSD-50	ES-4398-2130	Santoprene	GRY	GRY	2	0.0500	1.30	12			N0777444			1310620	
Tube-SanSD-50	ES-4398-2130	Santoprene	GRY	GRY	2	0.0500	1.30	12			N8145173			1310620	
Tube-PVCD-50	ES-4398-1130	PVC	GRY	GRY	2	0.0500	1.30	12	46.791.018		47501010				3710034500
Tube-SolFSD-50	ES-4398-5130	Solva	GRY	GRY	2	0.0500	1.30	12							3710035200
Tube-PVCD-55	ES-4398-1142	PVC	YEL	YEL	2	0.0550	1.42	12			N0777521				
Tube-SanSD-60	ES-4398-2152	Santoprene	YEL	BLU	2	0.0600	1.52	12	G182065216						
Tube-PVCD-60	ES-4398-1152	PVC	YEL	BLU	2	0.0600	1.52	12			09923536	47101006			
Tube-SanSD-30	ES-4398-2165	Santoprene	BLU	BLU	2	0.0650	1.65	12							
Tube-PVCD-65	ES-4398-1165	PVC	BLU	BLU	2	0.0650	1.65	12			47101014				3710034600
Tube-PVCD-69	ES-4398-1175	PVC	BLU	GRN	2	0.0688	1.75	12			47101005				
Tube-SanSD-35	ES-4398-2185	Santoprene	GRN	GRN	2	0.0700	1.85	12			N0773116				
Tube-PVCD-70	ES-4398-1185	PVC	GRN	GRN	2	0.0700	1.85	12	46.791.016	N0777518					
Tube-PVCD-81	ES-4398-1206	PVC	PRPL	PRPL	2	0.0800	2.06	12			N0777561				
Tube-PVCD-90	ES-4398-1120	PVC	PRPL	BLK	2	0.0900	2.29	12							3710027300
Tube-SanSD-110	ES-4398-2279	Santoprene	PRPL	WHT	2	0.1100	2.79	12							
Tube-SolFSD-110	ES-4398-5279	Solva	PRPL	WHT	2	0.1100	2.79	12			02508080				
Tube-PVCD-125	ES-4398-1317	PVC	BLK	WHT	2	0.1250	3.18	12			N8122012				
Tube-Viton-25	ES-4398-7064	Viton	ORG	WHT	2	0.0250	0.64	12					842312051531		
Tube-SILSD-30	ES-4398-9076	Silicone	BLK	BLK	2	0.0300	0.76	6			00473552				3710044100
Tube-Viton-30	ES-4398-7076	Viton	BLK	BLK	2	0.0300	0.76	12			N0773118	3093552			3710027200
Tube-SILSD-35	ES-4398-9089	Silicone	ORG	ORG	2	0.0350	0.89	6							

Meinhard P/N	ESI P/N	Tubing Type	Color Code	Stops	ID (in)	ID (mm)	Qty	Agilent	JY - Horiba	PerkinElmer	Spectro Ametek	Teledyne	Thermo iCAP Elemental TJA	Thermo VG	Varian
Tube-Viton-35	ES-4398-7089	Viton	ORG	ORG	2	0.0350	0.89	12							
Tube-SILSD-40	ES-4398-9102	Silicone	WHT	WHT	2	0.0400	1.02	6	G182065217	N0777441					3710044200
Tube-Viton-40	ES-4398-7102	Viton	WHT	WHT	2	0.0400	1.02	12		N0777442			842312051541		3710034500
Tube-SILSD-45	ES-4398-9114	Silicone	RED	RED	2	0.0450	1.14	6		N0691595					
Tube-Viton-45	ES-4398-7114	Viton	RED	RED	2	0.0450	1.14	12		N0773115		309000696			
Tube-SILSD-50	ES-4398-9130	Silicone	GRY	GRY	2	0.0500	1.30	6		N0777443					3710044300
Tube-Viton-50	ES-4398-7130	Viton	GRY	GRY	2	0.0500	1.30	12		N0777445					3710034500
Tube-Viton-60	ES-4398-7152	Viton	YEL	BLU	2	0.0600	1.52	12							
Tube-SILSD-65	ES-4398-9165	Silicone	BLU	BLU	2	0.0650	1.65	6							3710044400
Tube-Viton-65	ES-4398-7165	Viton	BLU	BLU	2	0.0650	1.65	12		N0777447					3710034600
Tube-Viton-80	ES-4398-7206	Viton	PRPL	PRPL	2	0.0800	2.06	12							
Tube-SanSD-90	ES-4398-2220	Santoprene	PRPL	BLK	2	0.0900	2.29	12					1066310		
Tube-SILSD-110	ES-4398-9279	Silicone	PRPL	WHT	2	0.1100	2.79	6		09923448					
MPP-019-F-PVC	MPP-019-F-PVC	PVC	ORG	RED	2	0.0075	0.19	12		N8145195					
MPP-019-PVC	MPP-019-PVC	PVC	ORG	RED	2	0.0075	0.19	12		N8145146					
MPP-027-F-PVC	MPP-027-F-PVC	PVC	ORG	BLU	2	0.0010	0.25	12		N8145196					
MPP-027-PVC	MPP-027-PVC	PVC	ORG	BLU	2	0.0010	0.25	12		N8145147					
MPP-038-F-PVC	MPP-038-F-PVC	PVC	ORG	GRN	2	0.0150	0.38	12		N8145197					
MPP-038-PVC	MPP-038-PVC	PVC	ORG	GRN	2	0.0150	0.38	12		N8145148					
MPP-038-S	MPP-038-S	Solva	ORG	GRN	2	0.0150	0.38	12		N8145211					
MPP-044-F-PVC	MPP-044-F-PVC	PVC	GRN	YEL	2	0.0173	0.44	12		N8145198					
MPP-051-F-PVC	MPP-051-F-PVC	PVC	ORG	YEL	2	0.0200	0.51	12		N8145199					
MPP-051-PVC	MPP-051-PVC	PVC	ORG	YEL	2	0.0200	0.51	12		N8145150					
MPP-064-F-PVC	MPP-064-F-PVC	PVC	ORG	WHT	2	0.0250	0.64	12		N8145201					
MPP-064-PVC	MPP-064-PVC	PVC	ORG	WHT	2	0.0250	0.64	12		N8145152					
MPP-076-F-PVC	MPP-076-F-PVC	PVC	BLK	BLK	2	0.0300	0.76	12		N8145202					
MPP-076-PHR	MPP-076-PHR	Santoprene	BLK	BLK	2	0.0400	0.76	12		N8145172					
MPP-076-PVC	MPP-076-PVC	PVC	BLK	BLK	2	0.0300	0.76	12		N8145153					
MPP-076-S	MPP-076-S	Solva	BLK	BLK	2	0.0300	0.76	12		N8145176					
MPP-089-PVC	MPP-089-PVC	PVC	ORG	ORG	2	0.0350	0.89	12		N8145154					
MPP-089-S	MPP-089-S	Solva	ORG	ORG	2	0.0350	0.89	12		N8145177					
MPP-095-PVC	MPP-095-PVC	PVC	WHT	BLK	2	0.0370	0.95	12		N8145155					
MPP-102-PVC	MPP-102-PVC	PVC	WHT	WHT	2	0.0400	1.02	12		N8145156					
MPP-102-S	MPP-102-S	Solva	WHT	WHT	2	0.0400	1.02	12		N8145179					
MPP-114-PVC	MPP-114-PVC	PVC	RED	RED	2	0.0450	1.14	12		N8145158					
MPP-114-S	MPP-114-S	Solva	RED	RED	2	0.0450	1.14	12		N8145181					
MPP-130-PHR	MPP-130-PHR	Santoprene	GRY	GRY	2	0.0500	1.30	12		N8145173					
MPP-130-PVC	MPP-130-PVC	PVC	GRY	GRY	2	0.0500	1.30	12		N8145160					
MPP-130-S	MPP-130-S	Solva	GRY	GRY	2	0.0500	1.30	12		N8145183					
MPP-142-PVC	MPP-142-PVC	PVC	YEL	YEL	2	0.0550	1.42	12		N8145161					
MPP-152-PHR	MPP-152-PHR	Santoprene	YEL	BLU	2	0.0600	1.52	12		N8145174					
MPP-152-PVC	MPP-152-PVC	PVC	YEL	BLU	2	0.0600	1.52	12		N8145162					
MPP-165-PVC	MPP-165-PVC	PVC	BLU	BLU	2	0.0650	1.65	12		N8145163					
MPP-175-PVC	MPP-175-PVC	PVC	BLU	GRN	2	0.0688	1.75	12		N8145164					
MPP-185-PVC	MPP-185-PVC	PVC	GRN	GRN	2	0.0700	1.85	12		N8145165					
MPP-206-PVC	MPP-206-PVC	PVC	PRPL	PRPL	2	0.0800	2.06	12		N8145166					
MPP-220-PVC	MPP-220-PVC	PVC	PRPL	BLK	2	0.0900	2.29	12		N8145167					
MPP-317-PVC	MPP-317-PVC	PVC	BLK	WHT	2	0.1250	3.18	12		N8145170					



# 3-Stop Peristaltic Pump Tubing Cross Reference Guide

Meinhard P/N	ESI P/N	Tubing Type	Color Code			Stops	ID (in)	ID (mm)	Qty	Agilent	JY - Horiba	PerkinElmer	Spectro Ametek	Teledyne	Thermo iCAP Elemental TJA	Thermo VG	Varian
Tube-PVCSD-075-3	ES-4398-3019	PVC	ORG	RED	ORG	3	0.0075	0.19	12	G183365572		N0695477					
Tube-PVCSD-15-3	ES-4398-3038	PVC	ORG	GRN	ORG	3	0.0150	0.38	12						13017706		
Tube-SolFSD-15-3	ES-4398-6038	Solva	ORG	GRN	ORG	3	0.0150	0.38	12						13173103		
Tube-PVCSD-30-3	ES-4398-3076	PVC	BLK	BLK	BLK	3	0.0300	0.76	12			B0506058				1301670	
Tube-PVCSD-35-3	ES-4398-3089	PVC	ORG	ORG	ORG	3	0.0350	0.89	12						13017700		
Tube-SILSD-35-3	ES-4398-a089	Silicone	ORG	ORG	ORG	3	0.0350	0.89	6						13017702		
Tube-SolFSD-35-3	ES-4398-6089	Solva	ORG	ORG	ORG	3	0.0350	0.89	12						13173102		
Tube-Viton-35-3	ES-4398-8089	Viton	ORG	ORG	ORG	3	0.0350	0.89	12						13017704		
Tube-PVCSD-40-3	ES-4398-3102	PVC	WHT	WHT	WHT	3	0.0400	1.02	12			B0506742					
Tube-SolFSD-40-3	ES-4398-6102	Solva	WHT	WHT	WHT	3	0.0400	1.02	12	G183365569		B0507692					
Tube-PVCSD-45-3	ES-4398-3114	PVC	RED	RED	RED	3	0.0450	1.14	12			B0193160			13017701		
Tube-SILSD-45-3	ES-4398-a114	Silicone	RED	RED	RED	3	0.0450	1.14	6						13017703		
Tube-SolFSD-45-3	ES-4398-6114	Solva	RED	RED	RED	3	0.0450	1.14	12						078532		
Tube-Viton-45-3	ES-4398-8114	Viton	RED	RED	RED	3	0.0450	1.14	12						13017705		
Tube-SolFSD-55-3	ES-4398-6142	Solva	YEL	YEL	YEL	3	0.0550	1.42	12						078530		
Tube-Viton-55-3	ES-4398-8142	Viton	YEL	YEL	YEL	3	0.0550	1.42	12								
Tube-PVCSD-60-3	ES-4398-3152	PVC	YEL	BLU	YEL	3	0.0600	1.52	12			B0193161					
Tube-SanSD-60-3	ES-4398-4152	Santoprene	YEL	BLU	YEL	3	0.0600	1.52	12	G183365570							
Tube-SolFSD-60-3	ES-4398-6152	Solva	YEL	BLU	YEL	3	0.0600	1.52	12						078539		
Tube-SolFSD-65-3	ES-4398-6165	Solva	BLU	BLU	BLU	3	0.0650	1.65	12						13173100		3710067900
Tube-PVCSD-81-3	ES-4398-3206	PVC	PRPL	PRPL	PRPL	3	0.0800	2.06	12			B0199034					
Tube-SolFSD-90-3	ES-4398-6229	Solva	PRPL	BLK	PRPL	3	0.0900	2.29	12						13173101		
Tube-PVCSD-125-3	ES-4398-3317	PVC	BLK	WHT	BLK	3	0.1250	3.18	12			B0508310					

Chemical Classification	PVC	Silicone	Viton	Santoprene
Acetaldehyde	U	X	U	X
Acetates	U	O	U	X
Acetone	U	X	U	U
Alcohol	X	X	X	-
Aliphatic Hydrocarbons	X	O	U	-
Aqua Regia	U	-	O	U
Aromatic Hydrocarbons	U	U	X	-
Benzene	O	U	X	U
Carbon Tetrachloride	O	U	X	U
Ethers	O	U	O	U
Gasoline (non-aromatic)	U	U	X	U
Gasoline (high aromatic)	U	U	X	-
Hydrochloric Acid (dil.)	X	U	X	X
Kerosene	U	U	X	U
Ketones	U	U	U	-
Laquer Solvents	U	U	U	U
Naphtha	O	U	X	U
Nitric Acid (dil.)	X	O	X	O
Oils, Animal	U	O	X	X
Oils, Mineral	U	O	X	X
Oils, Vegetable	O	X	X	X
Sulfuric Acid (dil.)	X	U	X	O
Turpentine	X	U	X	-
Water	X	X	X	X
Xylol	U	U	X	U



### Codes

X = Satisfactory

O = Use only after testing

U = Unsatisfactory

- = No data available





