

The MEINHARD® NEBULIZER

NOZZLE SELECTION GUIDE:

TYPE A

Application:	General purpose
Calibration reference:	1.0 L/min Ar
End surfaces:	lapped
Capillary tip recess, mm:	0.0
Uptake suction:	+
Stability of aerosol delivery:	+

TYPE C

Application:	High solids
Calibration reference:	1.0 L/min Ar
End surfaces:	vitreous
Capillary tip recess, mm:	~0.5
Uptake suction:	++
Stability of aerosol delivery:	++

TYPE K

Application:	Ar low-flow
Calibration reference:	0.7 L/min Ar
End surfaces:	lapped
Capillary tip recess, mm:	~0.5
Uptake suction:	++
Stability of aerosol delivery:	++



MODEL DESIGNATION:

TR-P_c-NR_a

Substitute A, C, or K for N to select Nozzle type
 Substitute nominal working pressure (20, 30, 50) for P.
 Substitute nominal aspiration rate (0.5, 1, 2, 3) for R.

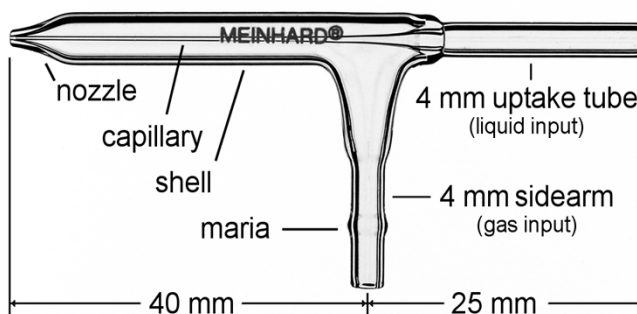
SPECIFICATIONS:

Configurations:	Concentric, monolithic
Materials:	Borosilicate glass or quartz
Tubulation O.D.:	Shell, 6mm; Fluid inputs, 4mm
Nozzles:	See selection guide (above)
Internal liquid volume:	~0.1 mL
Annular Separation at Nozzle:	~20 μm
Annular area:	0.03mm ²
Capillary I.D.:	
TR-series	0.22 - 0.32mm
HEN	0.10mm

Functional criteria:

P_c: Calibration input pressure at rated Ar flow
 R_a: Water aspiration at -5cm head, rated Ar flow

P _c (psig)	R _a (mL/min)
Nominal Range	Nominal Range
20 10 - 24	0.5 0.3 - 0.6
30 25 - 40	1 0.7 - 1.4
50 41 - 60	2 1.5 - 2.4
	3 2.5 - 3.5



NEBULIZER OPTIONS:

- TQ** Any Meinhard nebulizer is available in quartz. The A-type is available from stock.
- SB** Replaces the standard 4 mm solution inlet with a 3 mm o.d and 0.7 mm i.d. solution inlet.

MEINHARD

Elemental Scientific Glassblowing
 700 Corporate Circle, Suite L, Golden CO 80401 USA

NEBULIZER OPERATION:

The MEINHARD® nebulizer will aspirate liquid sample naturally when the rated flow of gas is directed into the sidearm and a sample feed is connected to the liquid input. All models may be operated with externally pumped analyte provided the sample flow is not significantly below the natural aspiration rate. Calibrations reflect a standard operational reference and are not intended as limitations on conditions of use, which can vary widely. Operation can be optimized for specific instruments.

NEBULIZER ACCESSORIES:

Fit Kit #1

Union, ferrules, and Tefzel tubing (1/16") to connect 1/16" sample tubing to Small Bore liquid input tube. A butt-fitting provides essentially continuous inside diameter between the sample tubing and the solution capillary. For use with SB option, HEN, and DIHEN

Fit Kit #1 Micro

Union, ferrules, and microbore Tefzel tubing for use with SB option. The microbore tubing feeds through the SB end fitting until it seals against the solution capillary. Minimizes dead volume.

Fit Kit #3

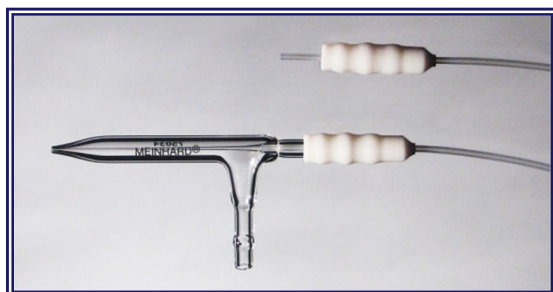
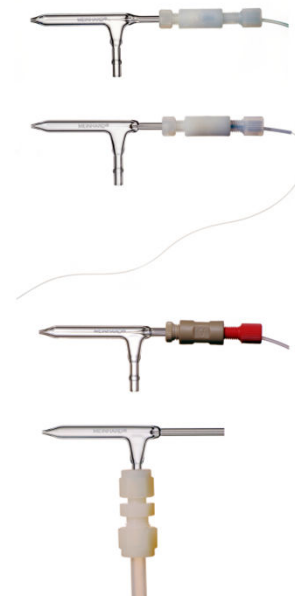
Union, ferrules, and Tefzel tubing (1/16") to connect to standard 4mm liquid inlet.

Fit Kit #2

Union and ferrules for secure, high-pressure connection of argon supply line (recommend for ≥ 50 psig (345 kPa), HEN and DIHEN).

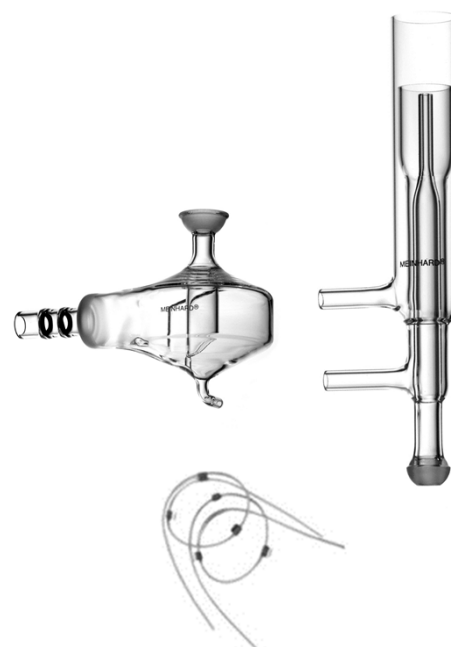
Fit Kit #3T

Press-on solution coupling for 4 mm o.d. nebulizer inlet. Included with every standard Meinhard nebulizer. Also fits most 4 mm spray chamber pumped drain fittings.



RELATED PRODUCTS:

Meinhard Glass Products offers common sizes and formulations of **peristaltic pump tubing**, standard and flared end, as well as Meinhard-quality **torches** and **spray chambers** for all ICP and ICPMS instruments from leading manufacturers.



MEINHARD

An Elemental Scientific Company

700 Corporate Circle, Suite L, Golden CO 80401 USA

Tel: 303.277.9776 FAX: 303.279.5156 E-mail: Sales@meinhard.com

www.meinhard.com 1-800-MEINHARD