

# 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<sub>c</sub>-NR<sub>a</sub>

- 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.

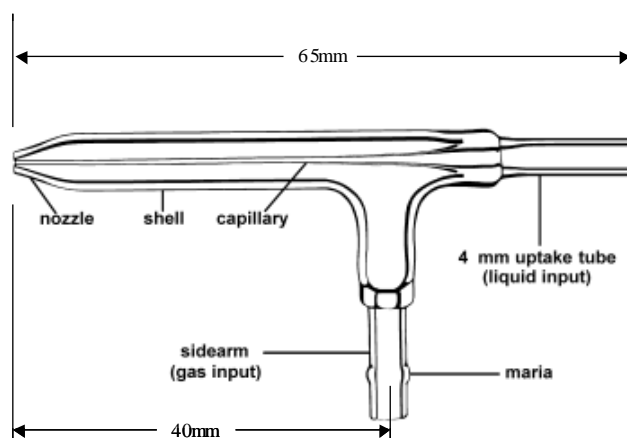
## SPECIFICATIONS:

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 <sup>2</sup>
Capillary I.D.:	TR-series 0.22 - 0.32mm HEN 0.10mm

### Functional criteria:

- P<sub>c</sub>: Calibration input pressure at rated Ar flow
- R<sub>a</sub>: Water aspiration at -5cm head, rated Ar flow

P <sub>c</sub> (psig)		R <sub>a</sub> (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:

### SB

The small-bore option reduces dead volume in the solution capillary. The input fitting is 3.2 mm o.d., and 0.67 mm i.d. It is particularly well-suited for coupling liquid chromatograph output to ICPMS. Use either Fit Kit #1 or Fit Kit #1 Micro.

### TQ

Any Meinhard nebulizer is available in quartz.

## 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 and ferrules 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. 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  $\geq 50$  psig (344 kPa), HEN and DIHEN).



## RELATED PRODUCTS:

Meinhard Glass Products offers Meinhard quality torches and spray chambers for all ICP and ICPMS instruments from leading manufacturers.

