

# ENVIRONMENTAL SAMPLING SYSTEM MODEL 3031200

PROVIDES REPRESENTATIVE SAMPLING AND PROPER CONDITIONING OF AMBIENT SUBMICROMETER AEROSOL FOR ACCURATE SIZE DISTRIBUTION AND PARTICLE NUMBER CONCENTRATIONS!

The Environmental Sampling System Model 3031200 is an accessory for use with a wide variety of TSI particle sizers and counters, including the Ultrafine Particle Monitor, Scanning Mobility Particle Sizer™ spectrometers and Condensation Particle Counters. The Model 3031200 consists of standard components conveniently packaged together for you. Combine these components with your choice of appropriate length sampling tubes and vacuum source for easy setup in the field.



## The Model 3031200 consists of:

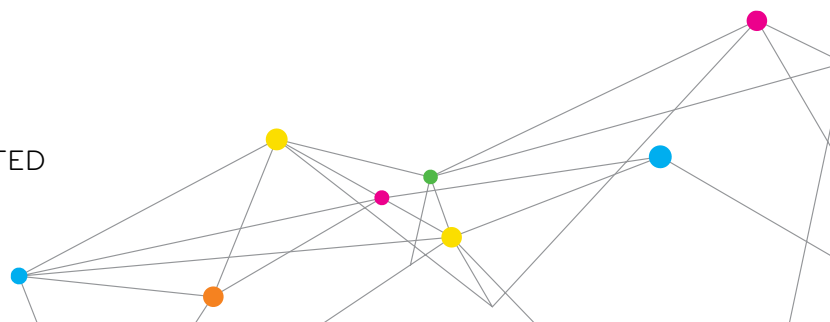
- + **Standard PM10 inlet:** Provides standardized size-selective sampling of outdoor aerosol.
- + **Sharp cut PM1 cyclone:** Removes large particles to avoid contamination of the UFP Monitor.
- + **Flow splitter:** Splits the inlet sample flow to enable sub-sampling a portion of the flow into the particle measurement system.
- + **Nafion® dryer:** Conditions the sample to reduce effects of relative humidity on the aerosol.

## Features and Benefits

- + Standard PM10 inlet
- + Sharp cut PM1 cyclone
- + Easy setup
- + Low-maintenance drying system
- + Minimal particle losses
- + Compatibility with a wide variety of TSI particle counters and sizers



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# SPECIFICATIONS

## ENVIRONMENTAL SAMPLING SYSTEM MODEL 3031200

Max. Particle Size	1µm (aerodynamic diameter)
Recommended Flowrate	16.7 L/min at inlet, up to 5 L/min at sampling port
Humidity Reduction	Sampling reduced to less than 50% RH at sampling port for given flowrates
Particle Transmission Efficiency*	82% at 25 nm; 87% at 40 nm; 93% at 60 nm; 97% at 150 nm and 100% at 300 nm

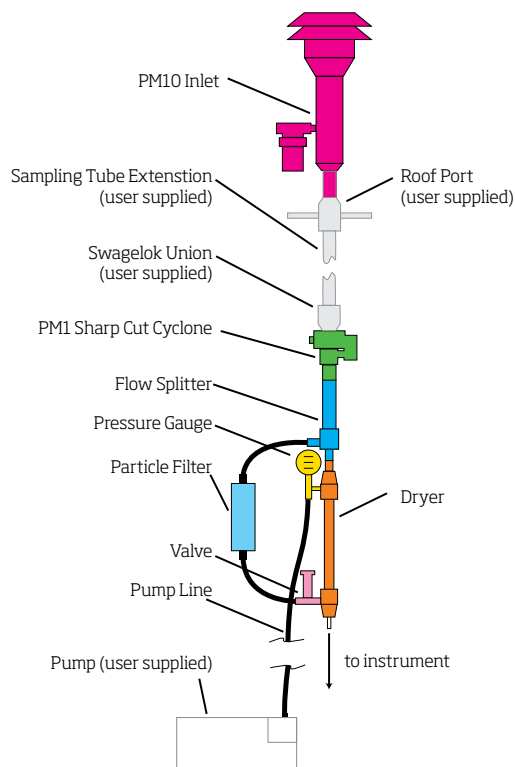
\*Measured at 16.7 L/min inlet flow and 5 L/min sample flow.

Description	Quantity	TSI Supplied	User Supplied
Standard PM10 inlet	1	+	
PM1 sharp cut cyclone	1	+	
Flow splitter	1	+	
Nafion® dryer	1	+	
Pressure gauge assembly	1	+	
Particle filter for clean air supply to dryer	1	+	
Needle valve	1	+	
Polyethylene tube .25" OD	10 ft	+	
Conductive Tubing (fits .25" barb)	3 ft	+	
Stainless steel sampling tube 1.25" OD x 0.062" wall	as needed		+
Roof port	1		+
1.25" Stainless steel swagelok tubing union	at least 1		+
Tripod or guy-wires	as needed		+
Vacuum pump (available accessory from TSI)	1		+
Flowmeter (available accessory from TSI)	1		+

Specifications are subject to change without notice.

TSI and the TSI logo are registered trademarks, and Scanning Mobility Particle Sizer is a trademark of TSI Incorporated.

Nafion® is a registered trademark of E.I. du Pont de Nemours and Company.



### TO ORDER

#### Environmental Sampling System

Specify	Description
3031200	Environmental Sampling System

#### Accessories

Specify	Description
3033	Vacuum Pump
3708	4-way Sample Flow Splitter
4140	Mass Flowmeter

Accessories must be ordered separately



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