

Personal Sampling Overview

Lightweight. Durable. Accurate.



Introduction

URG manufactures a wide variety of instruments for indoor and outdoor air sampling. We actively participate in the research and development of instruments for air pollution studies all over the world. **Personal Exposure** sampling is just one area in which URG has made strides to produce accurate and reliable instruments. One of the most difficult aspects for these studies is correlating ambient concentrations with actual exposure. This creates the need for modular personal sampling monitors that can be used in an everyday setting.

Our lightweight, durable portable samplers allow for *accurate* measurements in a real life environment. Our Personal Samplers' most valuable feature is a **size-selective impactor inlet**. This allows for the selective measurement of respirable particles. Our monitors are available with 1.0, 2.5 and 10 μm inlets.

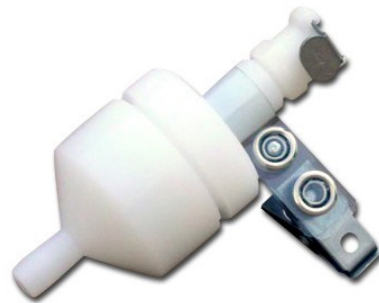
25mm Filter Pack for Personal Sampling

FEATURES:

- Stainless Steel Support Screen Also Available
Teflon[®] Coated
- Design Ensures Sample Integrity and Allows for Easy Transportation to and from Lab
- Hose Barb for 1/8" ID Tubing at Outlet for Easy Attachment to Vacuum Pump

SPECIFICATIONS:

- Designed to Contain 25mm Filter Media
- Quick Release at Inlet for Attaching to Personal Sampling Cyclone
- Includes 25mm Stainless Steel Support Screen
- 1 3/8" Largest Outer Diameter
- 3 1/4" Height
- Weight: .08 lb



URG-2000-25FG

3Lpm, 2.5 μm Personal Sampling Cyclone

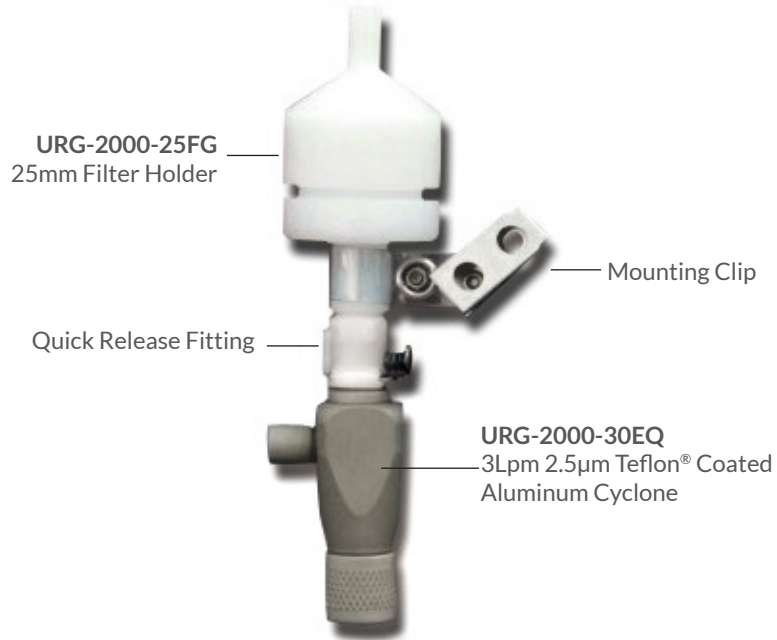
SPECIFICATIONS:

- Teflon[®] Coated Aluminum
- Dimensions: 2 1/2" x 1 1/4" x 3/4"
- Weight: .07 lb

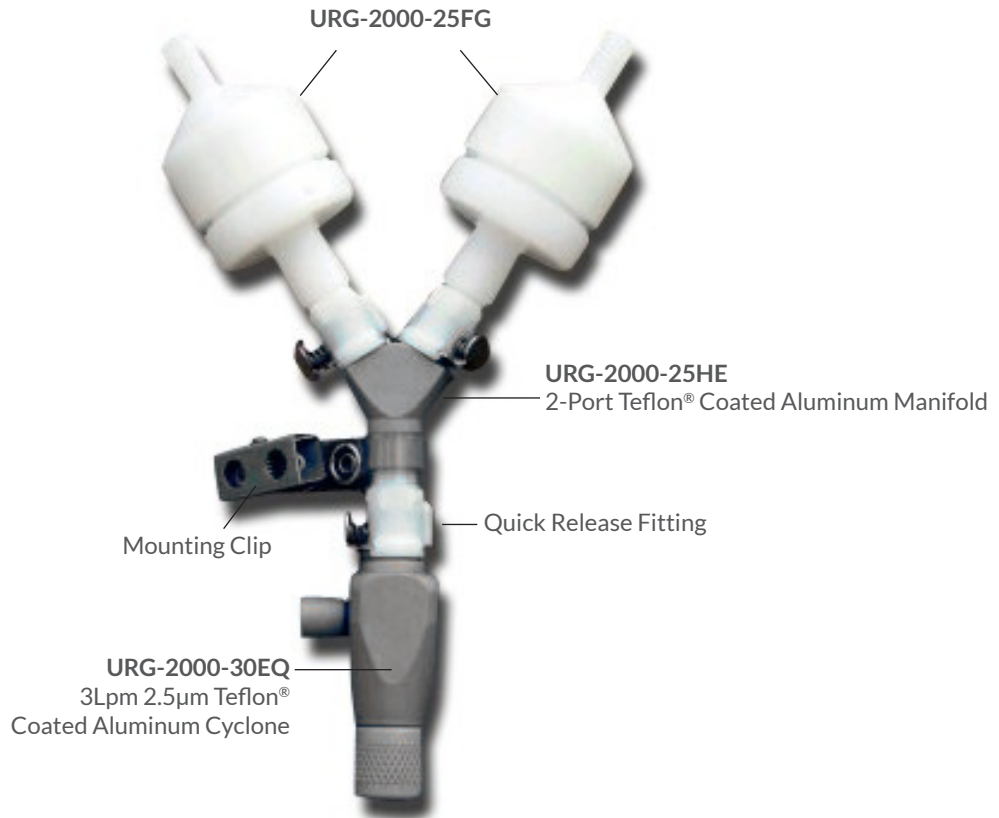


URG-2000-30EQ

Optional View



Optional View



URG's Personal Pesticide Samplers

This unit attaches to a sampling pump with tubing of suitable material. It separates fine particles from coarse particles by impaction of the latter on an oiled coarse plate. The purpose of this size selective inlet is to collect only respirable particles and vapors. Pesticides, PAH's and other Semi-Volatile and Non-volatile compounds are collected on the PUF. Trace Metals, Cations and Anions are collected on a Tissuquartz filter. The filter can be analyzed for trace metals using Energy Dispersive X-Ray Fluorescence (EDXRF) non-destructive method. Anions and Cations are analyzed by Ion Chromatography (IC). The tissuquartz filter can be analyzed for carbon using the Thermal/Optical method based on NIOSH 5040, and for Semi-Volatile and condensable organics using GC/FID/MS methods (see EPA-600-4-89-017)

MEASUREMENT CAPABILITIES:

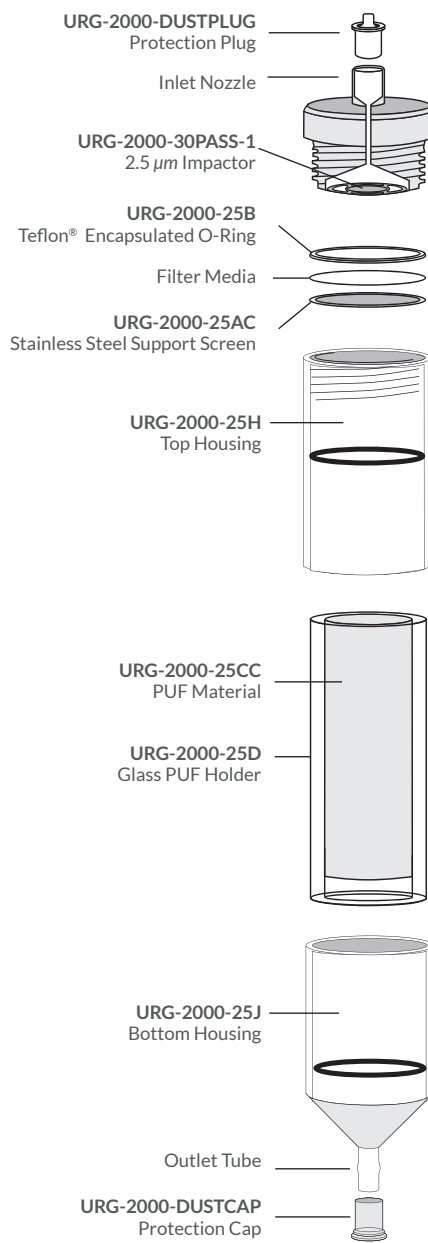
- **ASTM Standard 4861 Reads:** "7.1.6. A size-selective impactor inlet with an average particle-size cut-point of 2.5µm mean diameter at a sampling rate of 4Lpm may be used to exclude non-respirable airborne particulate matter (9)."
- **ASTM Standard 4947**
- **USEPA Method TO-10**
- Collects Pesticides, PAH's and Other Semi-Volatile Compounds
- Designed for 25mm Filter Media
- PUF Encased in Glass Holder for Easy Removal
- Impactor Removable for Easy Cleaning
- Wearable

AVAILABLE CONFIGURATIONS:

- URG-2000-25A 4Lpm, 2.5µm
- URG-2000-25AA 4Lpm, 1.0µm
- URG-2000-25AB 4Lpm, 10.0µm
- URG-2000-25AG 2Lpm, 2.5µm
- URG-2000-25AF 2Lpm, 1.0µm
- URG-2000-25AH 2Lpm, 10.0µm



URG-2000-25AB



Expanded View

Personal Impactor for 25mm Filter

SPECIFICATIONS:

- For Measuring Mass, Anions, Cations, Trace Metals, and Carbon
- 35mm Outer Diameter
- 66mm Overall Length
- High Density Polyethylene Housing

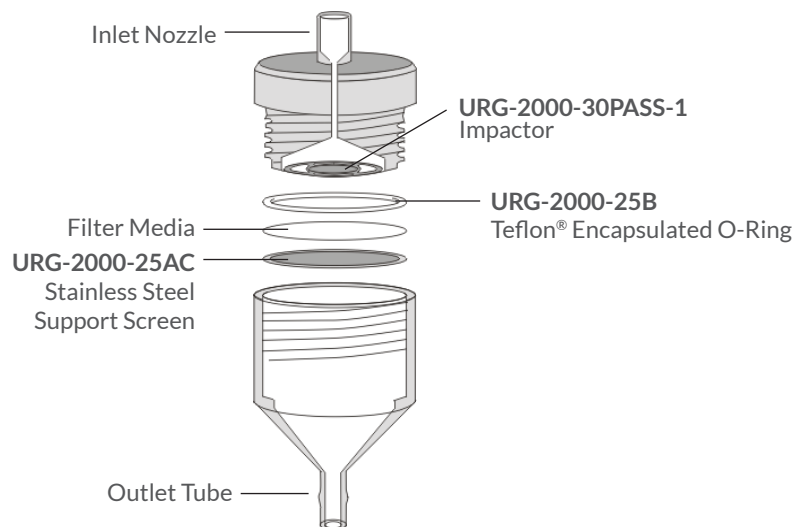
ORDERING INFORMATION:

- 4Lpm, 1 μ m
- 2Lpm, 1 μ m
- 4Lpm, 2.5 μ m
- 2Lpm, 2.5 μ m
- 4Lpm, 10 μ m
- 2Lpm, 10 μ m



URG-2000-25F

Expanded View



URG-2000-25E
Impactor Removal Tool

Personal Samplers for Human Biomarker Studies

Collects Acidic and Basic Gases as well as Particulate Phase Pollutants

A Teflon® filter is recommended for collecting Trace Metals, Cations, and Anions. This should be followed by a Nylon filter to capture any HNO₃ formed from the dissociation of NH₄NO₃ particles originally on the Teflon® filter.

An optional third filter, a Citric-Acid impregnated Whatman filter can be used to collect any ammonia (NH₃) that forms from the dissociation of NH₄NO₃. For more accurate particle measurement, two denuders can be used to remove gases that can be absorbed.

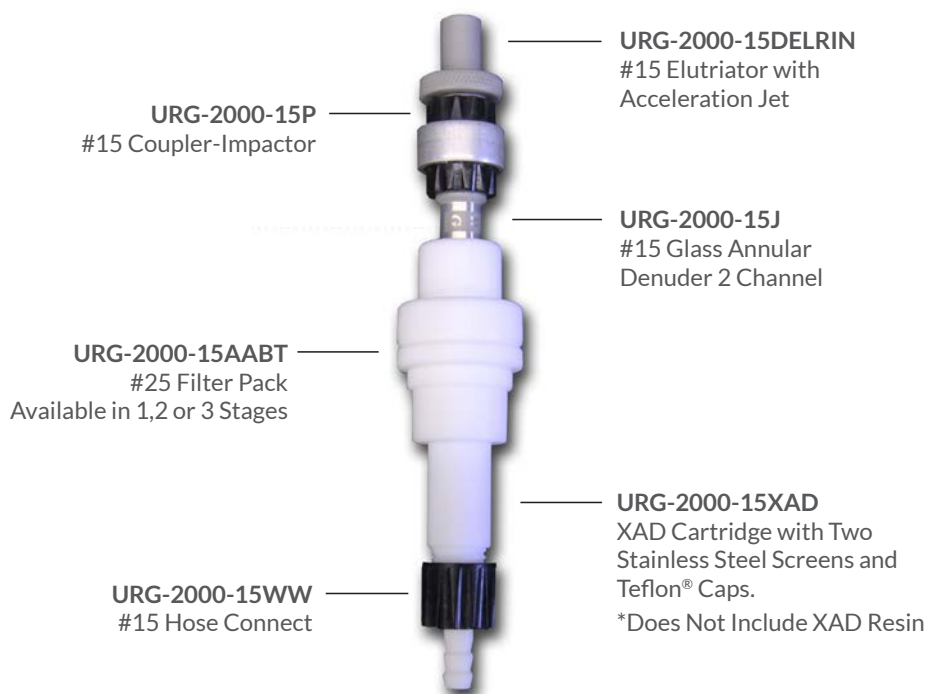
The URG-2000-15T features a Resin chamber for collection of secondary vapor phase analyses. All sections of the samplers are interchangeable and utilize sealing plugs for storage of collected analyses directly within the samplers section. Additionally, a three or more stage filter pack is used for Particle Sampling.

SPECIFICATIONS:

- For Measuring Fine Particles, Semi-Volatiles, Metals, and PAH's
- Lightweight, Modular
- 200mm Overall Length

ORDERING INFORMATION:

- 1.5Lpm, 2.5µm
- 1.7Lpm, 2.5µm
- 2Lpm, 2.5µm



PM-2.5 Personal Impactor with 25mm Cassette

SPECIFICATIONS:

- For Measuring Fine Particles, Semi-Volatiles, Metals, and PAH's
- Lightweight, Modular
- 200mm Overall Length

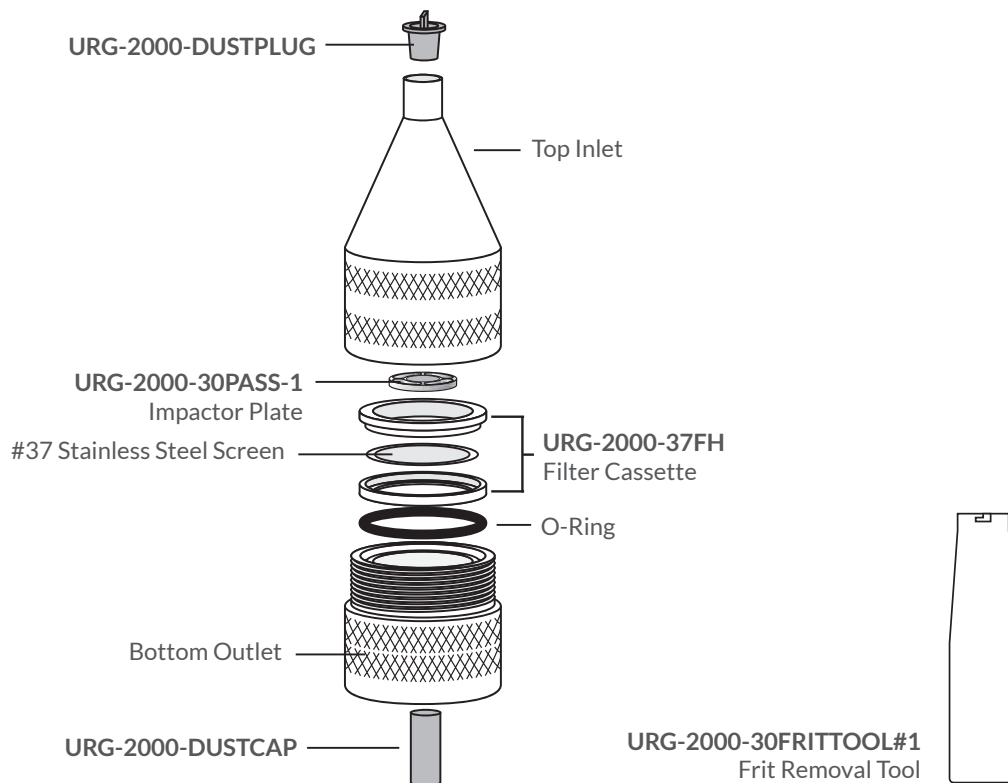
ORDERING INFORMATION:

- 1.5Lpm, 2.5µm
- 1.7Lpm, 2.5µm
- 2Lpm, 2.5µm



URG-2000-37F

Expanded View





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