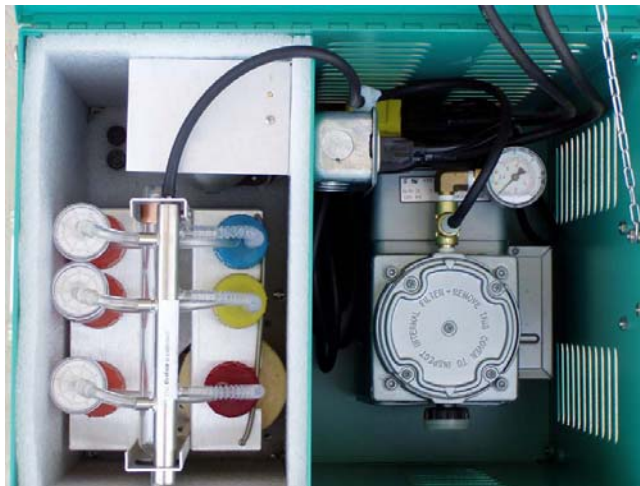


RAC 3-Gas Collecting Sampler

In 1975, the Environmental Protection Agency (EPA) revealed that the accuracy of established wet-chemical SO₂ sampling procedures is adversely affected by high ambient temperatures. At 50°C (122°F), for example, about 75% of the SO₂ in a collected or stored sample will be lost because of thermal instability within a 24-hour period. Sample degradation begins in the 20°C (68°F) range, with an initial loss factor of approximately 0.9% in 24 hours, and progresses at an increasing rate as the ambient temperature rises. The rate of decay increases five-fold for every 10°C increase in temperature over the range of 20° to 40°C (68 to 104°F). The RAC 3-Gas design eliminates this problem in SO₂ sampling.

It features a rugged, solid-state thermoelectric (Peltier Effect) cooling-heating system that maintains the temperature of the SO₂ bubbler and reagent between 5° and 25°C (41° and 77°F) in an ambient temperature range from -25° to 50°C (-13° to 122°F). As a result, all the SO₂ collected during a sampling cycle is preserved for optimum accuracy of sample evaluation by standardized wet chemistry and spectrophotometric procedures.



Features

Meets or Exceeds EPA Reference Method Specifications for Sampling SO₂ in Ambient Air

Peltier Cooling-Heating System Maintains SO₂ reagent Between 5° & 25°C for Optimum Sample Stability at Ambient Temperature from 5° to 50°C

Portable & Easy to Operate

Critical Orifices Provide 200 ml/min Flow Rate (Nominal) Through System

All Orifices Protected by In-line Filters & Demisters to Prevent Clogging & Flow Reduction

Adjustable Heater & Fan Prevents Reagent Freezing in Non-Thermoelectrically Controlled Bubblers

Sampler Cabinets Equipped with Thermostatically Controlled Heater

Modified Kit Available for Adapting to RAC 5-Gas Samplers to use Thermoelectric Module for SO₂ Sampling

Models

Model 209068 RAC 3-Gas Collecting Sampler, Includes:

Complete Sampling Train

Vacuum Pump

3-Wire Power Cord

Tubing & Connections

Pack of (3 ea.) Orifices, Filters & Back-Up Discs

2-Compartment, Louvered, Weather Resistant Steel Shelter Carrying Case

Model 209097 RAC 3-Gas Collecting Sampler, Includes:

Same as 209068 (above) but with 220v, 50Hz Motor Accessories

Individual Components

209038	Red 100ml Poly Tube with Caps and Shipping Tubes
209039	Yellow 100ml Poly Tube with Caps and Shipping Tubes
209040	Blue 100ml Poly Tube with Caps and Shipping Tubes
209041	Green 100ml Poly Tube with Caps and Shipping Tubes
209042	Orange 100ml Poly Tube with Caps and Shipping Tubes
209043	Natural 100ml Poly Tube with Caps and Shipping Tubes
209071	3 Gas Sampler, Indoor Model, Glass Orifice, 110v/60Hz
209092	3 Gas TE Heat Exchanger Assembly
209095	3 Gas TE Power Module, 110v/60Hz
994012	100ml Poly Tube Only - Natural
994013	100ml Poly Tube Only - Red
994014	100ml Poly Tube Only - Yellow
994015	100ml Poly Tube Only - Blue
994016	100ml Poly Tube Only - Green
994017	100ml Poly Tube Only - Orange
994018	Stopper Only - Natural
994019	Stopper Only - Red

994020	Stopper Only - Yellow
994021	Stopper Only - Blue
994022	Stopper Only - Green
994023	Stopper Only - Orange
997010	1 lpm Glass Orifice
997011	0.21 lpm Glass Orifice
997012	2 lpm Glass Orifice
997013	0.5 lpm Glass Orifice
997015	Tapered Glass Impinger Tube 54/55
997016	Tapered Glass Impinger Tube 78/79
997017	Tapered Glass Impinger Tube 60/64
997018	Glass Frit Tube
997104	3/5 Glass Inlet Manifold
997530	Pump Repair Kit for 3/5 Gas Sampler
997589	3/5 Gas Corrugated Teflon® Tubing with Cap
997605	3/5 Gas Poly Inlet Funnel
997618	3/5 Gas Corrugated Teflon® Tubing w/2 Caps
991578	3 Gas Shelter Model Complete Pump, 110v/60Hz
992424	24-hour Timer, 110v/60Hz
992425	7-day Skip Timer, 110v/60Hz

Specifications

Shelter model

Electrical	115v, 60 Hz, 3.7 amp or 220v, 50/60 Hz, 1.9 amp
Weight	33 pounds including pump (w/o timer installed)
Dimensions	27½" high x 18" wide x 14" deep with legs extended; 15" with legs raised

Indoor model

Electrical	115v, 60 Hz, 1.9 amp or 220v, 50/60 Hz, 1.0 amp
Weight	24 pounds without pump
Dimensions	15-7/16" high x 13¼" wide x 8¼" deep

Vacuum Pump

Vacuum Pump	1/6 hp, 1.8cfm free flow, 29"Hg VAC, continuous duty, overload protection
Weight	6 pounds
Dimensions	11-5/8" long x 5-5/8" wide x 8½" high