

These two regulated air sampling systems are ideal for gathering particulates and iodine for subsequent laboratory radiological measurements.

RAS-1 & RAS-2

Portable Particulate Air Sampler



- Regulated airflow
- 47 mm filter holder
- Flowmeter & vacuum gauge
- Optional iodine cartridge holder
- Indoor & outdoor configurations

RAS-1

The Model RAS-1 is a compact, portable air particulate sampler containing an oil-free vacuum pump, motor, airflow regulator, flowmeter, vacuum gauge and filter holder.

The Thermo Scientific airflow regulator is designed to maintain a constant pressure drop across an in-line orifice by controlling a variable bypass valve into the pump. The orifice is adjustable, permitting flow rate adjustment from near zero up to the maximum pump flow capacity. This flow control system permits the pump to operate at a minimum pressure drop at all times, which provides cooler pump operation to extend the lifetime.

Some RAS-1 operating curves are shown on the following page. The top line is the pump operating curve. The curves below the pump operating curve show how the sample inlet flow varies with intake vacuum increases.

RAS-2

The Model RAS-2 is a weatherproof air particulate sampler containing an oil-free vacuum pump, motor, airflow regulator, flowmeter, vacuum gauge and filter holder. The system is mounted in a weatherproof enclosure (WPH-1) permitting exterior use. The pump and motor provide enough heat to prevent winter freeze-up and an exhaust fan provides summer cooling.

The Thermo Scientific rapid airflow regulator is designed to maintain a constant pressure drop across an inline orifice by controlling a variable bypass valve into the pump. The orifice is adjustable permitting flow rate adjustment from near zero up to the maximum pump flow capacity.

This flow control system permits the pump to operate at a minimum pressure drop at all times, which provides cooler pump operation to extend the lifetime.

RAS-1 & RAS-2 Specifications

RAS-1

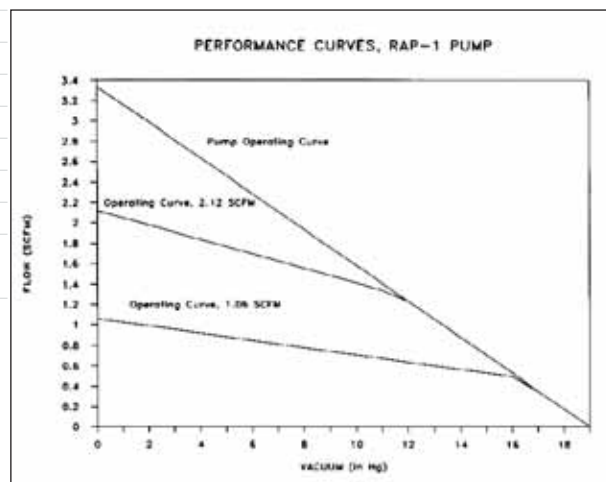
Pump Type:	Oil-free, carbon vane
Motor:	1/4 HP, 115 V, 60 Hz, 5 A (220 V, 50 Hz optional)
Maximum Vacuum:	482 mm Hg (19 in. HG) at sea level
Flow Rates:	See figure
Filter Holder:	Model FH-1, 47-mm
Flow Meter:	0 to 100 L/min (0 to 3.5 cfm)
Vacuum Gauge:	0 to 30 in. Hg (0 to 760 mm Hg)
Size:	451 x 178 x 279 mm (17.75 x 7 x 11 in.)
Weight:	15.9 kg (35 lbs)
Calibration:	The unit is supplied with a three-point flow calibration using a mass flowmeter.

RAS-2

Pump Type:	Oil free, carbon vane
Motor:	1/4 HP, 115 V, 60 Hz, 5 A (220 V, 50 Hz optional)
Maximum Vacuum:	482 mm Hg (19 in. Hg) at sea level
Flow Rates:	See figure
Filter Holder:	Model FH-1, 47-mm
Flowmeter:	0 to 100 L/min (0 to 3.5 cfm)
Vacuum Gauge:	0 to 760 mm Hg (0 to 30 in. Hg)
Size:	580 x 235 x 330 mm (23 x 9.25 x 13 in.)
Weight:	26.3 kg (58 lbs.)
Calibration:	The unit is supplied with a three-point flow calibration using a mass flowmeter.

Options

Model ICH-1:	Iodine cartridge holder
Part No. IC-1:	Iodine cartridge
Model ZP10758009:	Calibration adapter (Mates FH-1 to 1-inch NPT)
Model RAS1 ETM:	Elapsed time meter: (1000 hour)
Part No. FIFP8:	Filter paper, 47-mm
RAP1R RK1:	Regulator repair kit
RAP1 RK2:	Pump and regulator repair kit, calibration adapter.



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