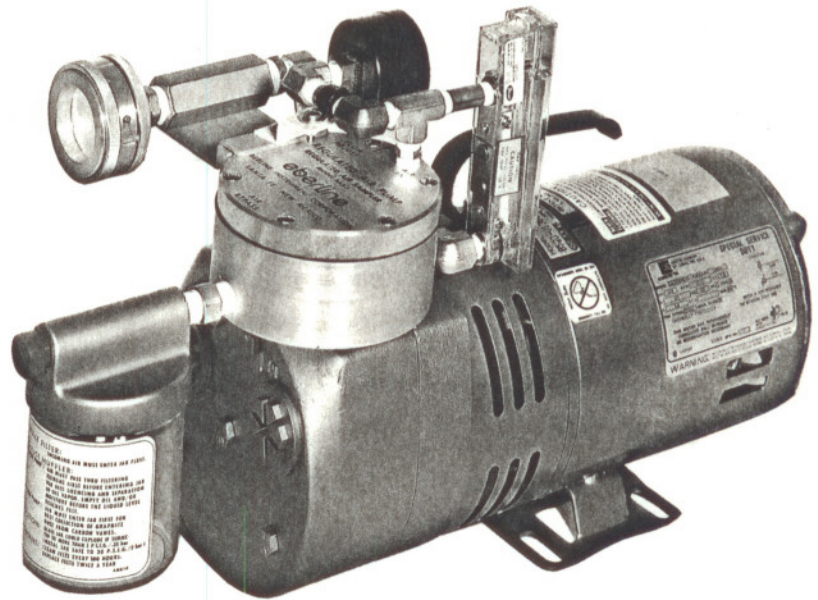


Regulated Air Sampler

Model RAS-1



- PORTABLE AIR-PARTICULATE SAMPLER
- OPTIONAL IODINE CARTRIDGE HOLDER
- FLOWMETER AND VACUUM GAUGE
- 47-mm FILTER HOLDER

Eberline A subsidiary of
**Thermo Instrument
Systems Inc.**

RAS-1

Model RAS-1, Regulated Air Sampler

GENERAL DESCRIPTION

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 Eberline 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

SPECIFICATIONS

Pump Type: Oil-free, carbon vane

Motor: ¼ HP, 115 V, 60 Hz, 5 A
(220 V, 50 Hz optional)

Maximum Vacuum: 19 inches 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 ft³/min)

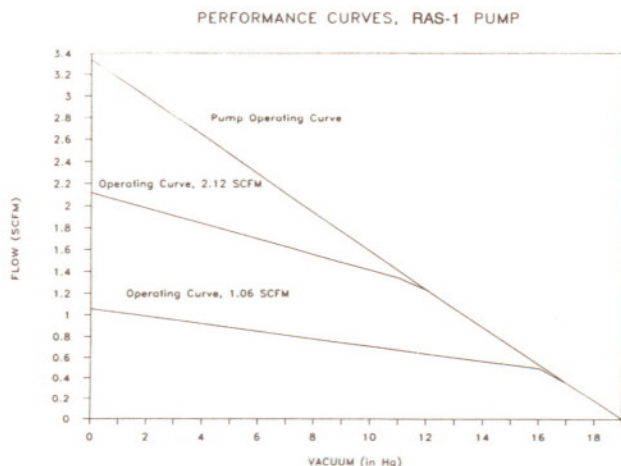
Vacuum Gauge: 0 to 30 inches Hg
(0 to 760 mm Hg)

Size: 17.75 inches long, 7 inches wide, 11 inches high (45.1 cm x 17.8 cm x 27.9 cm)

Weight: 35 pounds (15.9 kg)

Calibration

The unit is supplied with a three-point flow calibration using a mass flowmeter.



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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 below. 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 for two different regulated settings. After the regulator is set at a particular inlet flow the sample flow rate follows a similar curve, decreasing as intake vacuum increases.

AVAILABLE ACCESSORIES

Iodine Cartridge Holder: Model ICH-1

Iodine Cartridge: Part No. IC-1

Calibration Adapter: Model ZP10758009
(Mates FH-1 to 1-inch NPT)

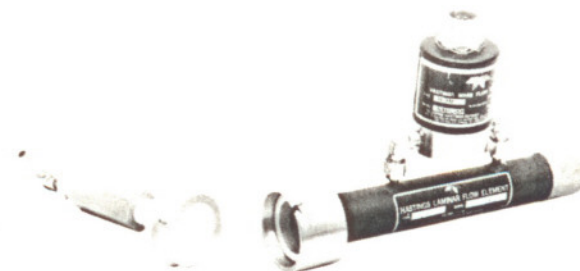
Elapsed Time Meter: (1000 hour): Model RAS1
ETM

Filter Paper: Part No. FIFP8, 47-mm

RAP-1 Pump Repair Kit: PURK3(1)

Regulator Repair Kit: RAP1R RK1(3)

Pump and Regulator Repair Kit: RAP1 RK2(4)



Calibration Adapter (Shown with Mass Flowmeter attached) Mass Flowmeters are not sold by Eberline.

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P.O. Box 2108
Santa Fe, New Mexico 87504-2108
(505) 471-3232 FAX: (505) 473-9221