

MAINTENANCE

The A23-14 ozone generator will normally provide many years of stable ozone production. Analytical Technology strongly discourages customer maintenance of this product due to special handling procedures necessary to service the quartz glass elements of the generator cell. After about 1000 hours of operation, the generator output should be recertified at the factory.

SPARE PARTS LIST

<u>Part Number</u>	<u>Description</u>
57-0034	103 liter, 20.9% O ₂ /N ₂ cylinder
44-0124	Generator Outlet Tube (FEP)
55-0025	Fixed flow regulator, 500 cc/min.
44-0049	Cylinder Outlet Tube 10"
55-0026	Carrying case

INTRODUCTION

The Model A23-14 is an easy to use, line-powered, ozone calibration source. The generator produces ozone with a concentration of approximately 0.8 parts per million (PPM V/V) and at constant flow rate of 500 cubic centimeters per minute. Ozone is produced through the photochemical reaction of oxygen with 185nm mercury lamp emission. Dry air for the system is provided by an included disposable 103 liter cylinder providing in excess of 3 hours of operation before the cylinder is exhausted. The system is packaged in a compact carrying case that includes all needed accessories.

WARNING - INHALATION HAZARD: While ozone produced by the A23-14 is below the danger level, some individuals may experience irritation of the mucous membranes in the mouth, nose and throat with sufficient exposure. Always use the generator in a well ventilated area and discontinue use if any irritation is noted.

WARNING - EYE HAZARD: Short-wave ultra-violet radiation is produced by the mercury lamp in the ozone generator. Eye injury can occur if the mercury tube is viewed without protective eyewear. Never operate the ozone generator with the cell removed from the housing. ATI suggests that A23-14 generators requiring service be returned to plant for repair and calibration.

NOTE: Materials in the gas delivery path are made from materials non-reactive to ozone. Do not substitute other materials for the generator outlet fitting, the gas delivery tube or the calibration adapter. Replacement parts are available from the factory. Custom configurations can be supplied if necessary.

NOTE: Before beginning calibration of a system, calibration procedures should be reviewed. Familiarization with calibration procedures will reduce unnecessary use of gas and increase generator cell life. No warm-up time is required so always close the valve on the flow regulator and unplug the generator when the system is not in use.

SPECIFICATIONS

Power	120 VAC, 60 Hz, 0.40 ampere
	230 VAC, 50 Hz, 0.21 ampere (optional)
Ozone concentration	.8 ppm nominal, individually calibrated
Flow rate	500 cc/minute
Generator Outlet Tube Length	5 Feet Teflon lined PVC
Air Cylinder	103 liter disposable cylinder
Regulator Valve	Fixed flow regulator at 500 cc./min.
Case dimensions	23" high, 8" wide, 4" deep, integral carrying handle
Weight	15 lbs. (6.8Kg)

OPERATION

Operation of the A23-14 ozone generator is extremely simple. Open the top section of the carrying case and pull out the AC power cord and outlet tubing. Check the pressure reading on the air cylinder. Replace the air cylinder if the reading is below 100 psi. Plug-in the ozone generator line cord and allow 5 minutes for warm-up. Open the valve on the air cylinder regulator and allow the unit to stabilize for about 1 minute before use.

Generators are supplied with 5 feet of outlet tubing. This tubing contains a Teflon lining and should not be replaced with any other type of tubing. You will need to connect the outlet of this tube to whatever calibration cup or adapter fits the gas sensor being adjusted. Be sure that the calibration adapter contains outlet holes so that the sensor does not see excessive pressure from the air cylinder.

Prior to setting the span using the generator, insure that zero adjustment has been accomplished on the sensor/transmitter. Connect the calibration adapter to the sensor to be calibrated. After a brief delay while the delivery tube is filled, ozone will begin to flow into the calibration adapter. Refer to the specific sensor/transmitter procedure for recommendations on proper ozone application time for calibration. When calibration has been completed close the valve on the flow regulator and unplug the generator.

The ozone gas concentration in the generator outlet is nominally around 0.80 PPM. However, each generator is slightly different, and each generator is factory tested against a NIST traceable secondary standard. The actual measured value is noted on the calibration certificate supplied with the generator.

O&M Manual

Model A23-14 Ozone Generator

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CALIBRATION CERTIFICATE

Unit Serial Number: _____

Sensitivity: _____

Technician Initials: _____

Calibration Date: _____

The unit listed above has been factory calibrated using a NIST traceable secondary standard.