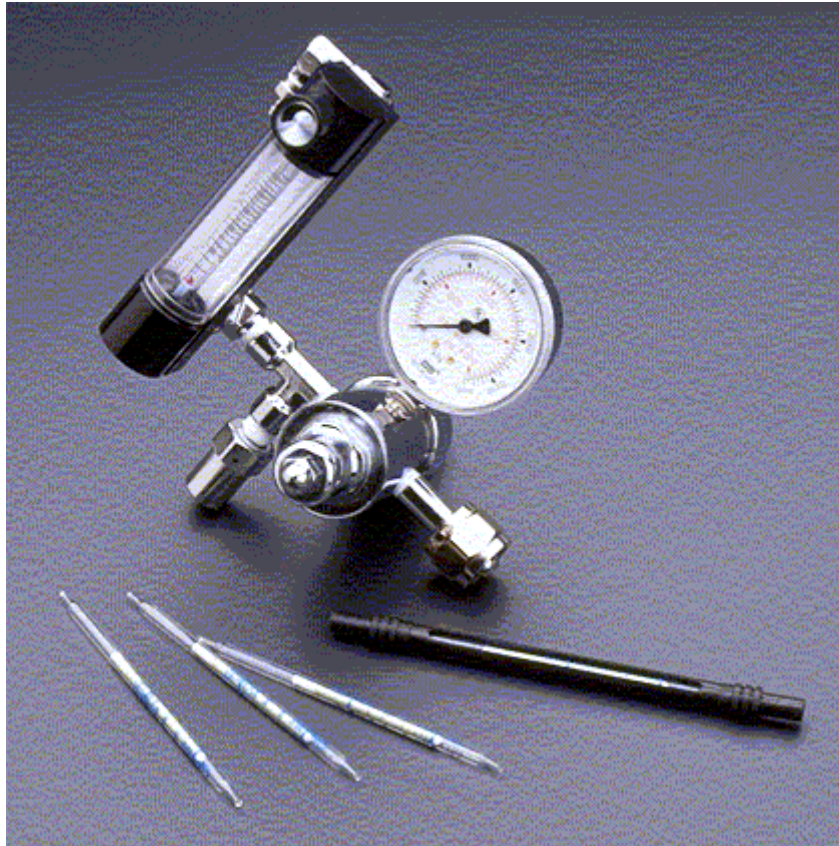


# NEXTTEQ LLC

## Airtec Kit



### **OPERATION AND SERVICE MANUAL**

Address: 8406 Benjamin Rd. Suite J, Tampa, FL 33634

Toll-free: 877-312-2333 • Toll-free Fax: 877-312-2444

---

Local Phone: 813-249-5888 • Fax: 813-249-0188

Website: [www.nextteq.com](http://www.nextteq.com)

# NEXTTEQ LLC

**Dear Valued Customer:**

Thank you for selecting the Nextteq LLC Airtec Kit. The Airtec Kit has been designed and manufactured to meet the highest levels of quality, convenience, and performance. Each Airtec Kit is tested to withstand the most rigorous operating conditions to ensure that you will receive continuous and dependable performance, day after day.

Our goal is to provide you with superior service and support at every level of our organization. Your satisfaction is our primary concern.

We urge you to call us with any questions or comments you may have. You can contact us **toll-free at 877-312-2333 or locally at 813-249-5888.**

All of us at Nextteq, LLC appreciate the opportunity to serve you now and in the future.

**Nextteq LLC**

# PACKING LIST

The following items are shipped with the  
**Standard Airtec Regulator Kit, Part No. STD-300:**

- Regulator, Part No. STD-300-R
- Operation & Service Manual, Part No. STD-300-M
- Rubber Shroud Tube Holder, Part No. 357

The following items are shipped with the  
**Deluxe Airtec Regulator Kit, Part. No. STD-301:**

- Regulator, Part No. STD-300-R
- Operation & Service Manual, Part No. STD-300-M
- Hard Shell Case, Part No. STD-300-1
- Rubber Shroud Tube Holder, Part No. 357
- Carbon Monoxide Tube, No.1A
- Carbon Dioxide Tube, No. 2AG
- Oil Mist Tube, No. 109AD
- Water Vapor Tube, No. 6A
- Water Vapor Tube, No. 6AG

*ALWAYS check to make certain you have received all of the items listed above.*

If you have any questions or need assistance, contact your Nextteq sales representative.

**Toll-free Phone: (877) 312-2333 • Local Phone:(813) 249-5888**

# TABLE OF CONTENTS

---

## **Preface**

---

Packing List.....	3
Warnings.....	6
Standard Safety Rules.....	9

---

## **Section I: Introduction**

---

1.1 Monitoring Breathing Air.....	10
1.2 Airtec Kit.....	12
1.3 Airtec Detector Tubes.....	12
1.4 Accuracy & Calibration.....	13

---

## **Section II: Airtec Kit Components**

---

2.1 Regulator.....	16
2.2 Flow meter.....	16
2.3 Tube Holder.....	17

---

## **Section III: Testing Procedure**

---

3.1 Introduction.....	18
3.2 Bottled Breathing Air.....	18
3.3 Compressor Systems.....	20

---

## **Section IV: Maintenance & Troubleshooting**

---

4.1 Testing for Leaks.....	21
4.2 Regulator/Flow meter Failure.....	21

# TABLE OF CONTENTS

---

## Section V: Sampling Tips

---

Tips for Tube Reading.....	22
----------------------------	----

---

## Appendices

---

Appendix A: Parts List.....	24
Appendix B: Returned Material Authorization.....	24

---

## List of Figures

---

Figure 1	The Airtec System.....	11
Figure 2	Airtec & Bottled Air.....	14
Figure 3	Airtec & Compressed Air.....	15
Figure 4	Reading the Flow meter.....	17

---

## List of Tables

---

Table 1	Compressed Gas Association Grade D Standards.....	12
Table 2	Airtec Tube Data.....	13
Table 3	Regulator Specifications.....	16
Table 4	Flow meter Specifications.....	17

# WARNINGS



## READ AND UNDERSTAND ALL WARNINGS BEFORE USE

Read and understand **ALL** warnings before using this product. Failure to read, understand, and comply with **ALL** warnings could result in property damage, severe personal injury or death.

Read and understand **ALL** applicable Federal, State, and Local environmental health and safety laws and regulations, including OSHA. Ensure complete compliance with **ALL** applicable laws and regulations before and during use of this product. In particular, follow **ALL** OSHA guidelines as set forth in Federal Register 20 CFR Part 1910.134 (d) (2) (ii) states that breathing air systems employing an oil-lubricated compressor must install a carbon monoxide alarm or a high temperature alarm or both. The Airtec System does not substitute for a CO or high temperature alarm.

**UNDER NO CIRCUMSTANCES** should this product be used except by qualified, trained, technically competent personnel and not until the warnings, *Operation and Service Manual*, labels, and other literature accompanying this product have been read and understood.

The *Operation and Service Manual* must be read and understood by each user before operating this product or using its accessories, in order to ensure proper and safe use and installation of this product and to ensure familiarity with the proper treatment and safety procedures in the event of an accident.

**ALWAYS** dispose of chemicals and calibration sources in compliance with **ALL** applicable safety laws, regulations, and guidelines for proper disposal. Failure to do so may result in environmental and property damage, personal injury or death.

**DO NOT** remove or alter any label or tag on this product, its accessories, or related products.

**DO NOT** operate this product should it malfunction or require repair. Operation of a malfunctioning product, or a product-requiring repair may result in serious personal injury or death.

**DO NOT** attempt to repair or modify the instrument, except as specified in the *Operation and Service Manual*. If repair is needed, contact the Nextteq LLC customer service department to arrange for a Returned Material Authorization (RMA).

# WARNINGS

**ONLY** use genuine Nextteq LLC replacement parts when performing any maintenance procedures provided in this manual. *Failure to do so may seriously impair instrument performance.* Repair or alteration of the product beyond the scope of these maintenance instructions, or by anyone other than an authorized Nextteq LLC serviceman, will void the warranty, and could cause the product to fail to perform as designed and persons who rely on this product for their safety could sustain severe personal injury or death.

Review the interferences for each detector tube used in conjunction with this equipment.

Observe any temperature or humidity corrections for the detector tubes used with this equipment.

Use **ONLY** Gastec detector tubes designed for use with the Airtec System. **DO NOT** use other brands of detector tubes with the Airtec tube holder.

Detector tubes contain chemical reagents. **DO NOT** ingest or allow children to ingest tube contents.

Avoid cuts from broken detector tubes.

The tube holder may have to be held in place during tube installation.

Excessive stretching of the tube holder will shorten the useful life of the tube holder.

The regulator incorporated in this equipment has a maximum inlet pressure of 3000 psig. **DO NOT** exceed this pressure.

The flow meter will not operate properly if the regulator inlet pressure drops below 50 psig.

The Airtec System should be checked for leaks on a routine basis. Cracks or leaks in the flow meter cover tube can affect flow meter accuracy. Leaks between the flow meter and the tube holder will result in low detector tube readings.

The flow meter is calibrated for breathing air. It is not accurate when applied to other gases.

The preset regulator delivery pressure of 50 psig should not be altered. The maximum safe pressure for the flow meter is 75 psig.

**DO NOT** over tighten **ANY** threaded connection. Over tightening the regulator fitting can cause distortion of the threads and/or seating surface. Over tightening the flow meter needle valve will damage fine internal threads and sensitive metering seat.

# WARNINGS

The system should always be stored in a clean dry place when not in use.

Some bottled breathing air is prepared by blending liquid nitrogen and liquid oxygen at 79% and 21% respectively. Oxygen content should be monitored when this type of breathing air is used.

**DO NOT** attempt to remove the Airtec regulator from the breathing air source while the regulator is under pressure.

Take precautions against water entry into the regulator. Use line pressure to blow out the connector prior to regulator hookup when sampling compressed air.

Be sure that the weight of the Airtec System is properly supported during hookup to compressed air lines.

Be sure that any adapters prepared for use of the Airtec System on compressed air lines are capable of handling line pressure.

**NEVER** place the Airtec regulator or flow meter in a vise.

## Disclaimer of Warranties

**Nextteq LLC assumes no responsibility whatsoever, to any party whatsoever, for any property damage, personal injury, or death received by or resulting from, in whole, or in part, the improper use, installation, or storage of this product by the user, person, firm, entity, corporation or party not adhering to the instructions and warnings or not adhering to all federal, state, and local environmental and occupational health and safety laws and regulations.**

**The seller shall not be liable for direct, indirect, consequential, incidental or other damages resulting from the sale and use of any goods and seller's liability hereunder shall be limited to repair or replacement of any goods found defective. This warranty is in lieu of all other warranties, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, which is expressly disclaimed.**



# WARNINGS

## READ CAREFULLY BEFORE USING THIS PRODUCT

Some safety rules associated with compressed air systems are listed below.

This equipment is pressurized when in service and can cause personal injury if it is improperly used or maintained.

**DO NOT** attempt to operate this equipment if any part is damaged or broken.

**DO NOT** tamper with the preset regulator adjusting screws as over pressurization could occur.

**DO NOT** connect the flow meter to any pressure source capable of exceeding 75 psig.

**DO NOT** attempt to alter or repair this equipment yourself. Return to factory for repairs.

**DO NOT** use this equipment for gases other than compressed air.

Compressed air at high pressures can accelerate burning of combustible materials.

Compressed air cylinders should not be used for breathing air unless specifically labeled as breathing air.

Compressed air cylinders should always be secured (e.g. chained) to a wall, post or in a cylinder cart in an upright position when in use.

Compressed air cylinders should not be exposed to heat or sparks.

Smoking is prohibited in cylinder storage or usage areas.

**NEVER** operate motorized vehicles near a breathing air compressor inlet.

Filter systems utilized for purifying breathing air from oil-lubricated compressors employ a catalyst to convert CO to CO<sub>2</sub>. Water contact will deactivate the catalyst.

# SECTION I: Introduction

## 1.1 MONITORING BREATHING AIR

A chemical plant worker inspecting a tank car cleaning operation, a fire fighter donning his self-contained breathing apparatus, and a SCUBA diver on a weekend holiday all face a common situation. Each is putting his or her life on the line by hooking up to a temporary air supply. Assured that by using a life-supporting device he/she is being provided maximum protection, the quality of that breathing air is probably the last thing on his or her mind.

A quantitative testing device is the only way to assure that the breathing air quality meets minimum standards. The faster, easier, and less expensive such testing is, the more often it can be applied.

A compressed breathing air system has two potential sources of contaminants: (1) those entering the system with the intake air and (2) those produced internally by a faulty compressor or inadequate filtration system. An example of the first type would be vehicle exhaust intrusion caused by locating the compressor air inlet too close to traffic areas or loading zones. An example of the second type might be oil mist accumulation caused by an overfilled oil reservoir and inadequate filter.

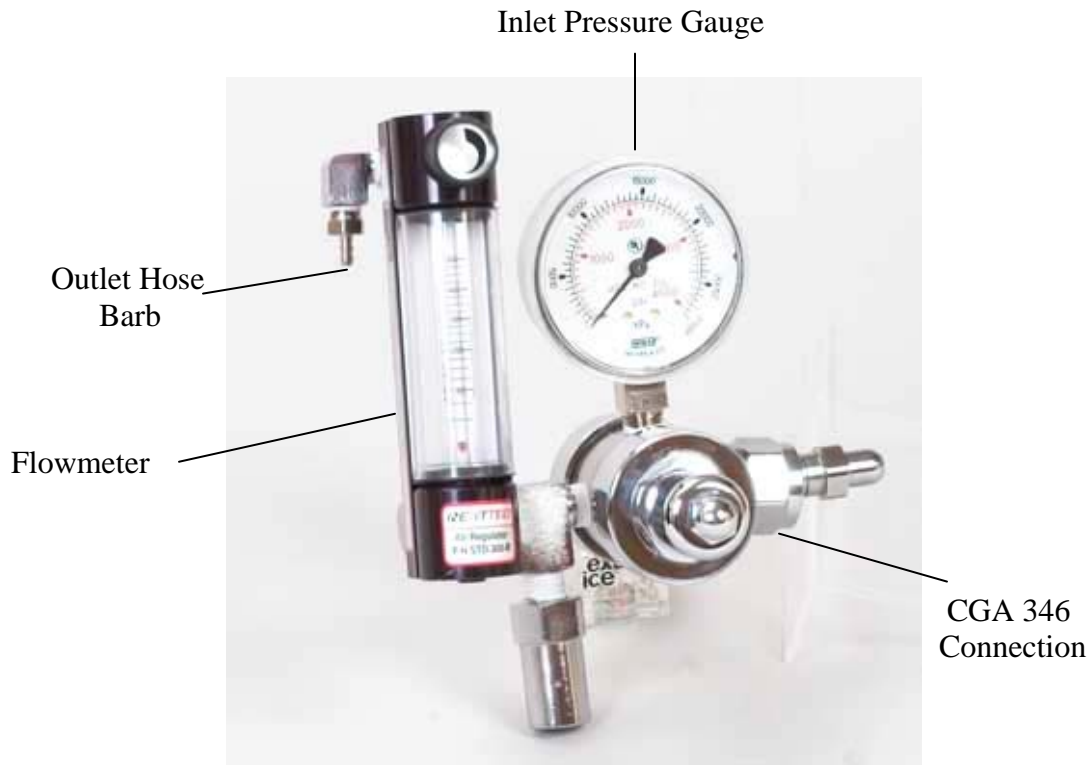
Some common breathing air contaminants are carbon monoxide, carbon dioxide, nitrogen oxides, oil mist, and water vapor, as well as oxygen deficiency.

- **Carbon Monoxide**  
Of the common potential contaminants, CO is the most deadly. It is colorless and odorless with no warning properties. CO combines with blood hemoglobin more readily than oxygen causing oxygen starvation in body tissues. Exposure causes headaches, heart palpitations, and loss of equilibrium, confusion, unconsciousness, and death.
- **Carbon Dioxide**  
CO<sub>2</sub> is also toxic but can be tolerated in much higher concentrations than CO. Effects are somewhat similar to CO, but the increased breathing rate accompanying CO<sub>2</sub> poisoning increases the intake of all coexisting contaminants. Exposure causes headaches, dizziness, sweating, shortness of breath, increased heartbeat and blood pressure, coma, asphyxiation, and convulsions.
- **Oil Mist**  
Oil mist and particulate matter are forms of condensed hydrocarbons. The larger particles are readily removed by the upper respiratory tract, but smaller particles can be retained and cause problems. Oil mist in the lungs can cause lipid pneumonia, and emphysema.
- **Water Vapor**  
Water Vapor in a breathing air system causes different problems. It can promote system corrosion and cause regulator failures due to icing in cold weather. It can destroy the catalyst in a filtration system that removes CO by converting it to CO<sub>2</sub>.

# SECTION I: Introduction

FIGURE 1

THE AIRTEC REGULATOR



# SECTION I: Introduction

---

## 1.2 AIRTEC KIT

---

Your Airtec Kit includes the following components:  
Regulator, Regulator Gauge, Flow Meter, Tube Holder

---

## 1.3 AIRTEC DETECTOR TUBES

---

The Airtec Kit is designed for use with the following Gastec Tubes:  
Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Oil Mist, Water Vapor

---

### WARNING

*Use only the Gastec tubes listed above.*

---

Airtec detector tubes are designed to meet the monitoring requirements for maintaining Grade D (Compressed Gas Association) breathing air. These standards are listed in Table 1 (below).

---

### NOTE

*The Airtec Kit is not equipped to monitor for oxygen deficiency. Nextteq LLC recommends the use of a portable sample draw oxygen meter.*

---

Table 2 (page 13) lists the data for Gastec Airtec Tubes included in the kit. Tube packages contain detailed instruction sheets on the storage and use of the tubes, as well as instructions on interpreting tube readings. Tubes are packaged ten per box, allowing ten tests. Tubes may be used only once.

**TABLE 1**

### COMPRESSED GAS ASSOCIATION GRADE D STANDARDS

Gas/Substance	Level	Comments
Carbon Dioxide	1000 ppm	Maximum level
Carbon Monoxide	10 ppm	Maximum level
Oil Mist	5 mg/m <sup>3</sup>	Maximum level
Oxygen	19.5 – 23.5%	
Water Vapor	---	Varies with use requirements

# SECTION I: Introduction

## 1.4 ACCURACY & CALIBRATION

The Airtec System when used in accordance with tube instructions provides an accuracy of  $\pm 25\%$ .

The flow meter is factory calibrated and should not require recalibration with normal use and proper care of the unit.

Should a calibration check be required, the unit may be returned to the factory, or calibration may be checked using a soap film bubble meter.

TABLE 2

AIRTEC TUBE DATA

Gas/ Substance	Part No.	Measuring Range	Flow Rate (cc/min)	Sample Time (Min)	Humidity Range (%RH)	Color Change
Carbon Monoxide	1A	5-50 ppm	100	3	20-90	Yellow to Dark Brown
Carbon Dioxide	2AG	200-3000 ppm	100	1.5		Pale Blue to Purple
Water Vapor	6AH	500-5000 ppm	300	1		Green to Purple
Water Vapor	6A	30-80 mg/m <sup>3</sup>	100	10	--	Yellow to Purple
Water Vapor	6AG	150-3000 mg/m <sup>3</sup>	300	1	--	Green to Purple
Nitrogen Oxides	11A	0.02-0.7	100	5		White to Bluish Green
		0.06-2	100	2		
Oil Mist *	109AD	0.2-5.0 mg/m <sup>3</sup>	1000	20		Orange to Pale Blue

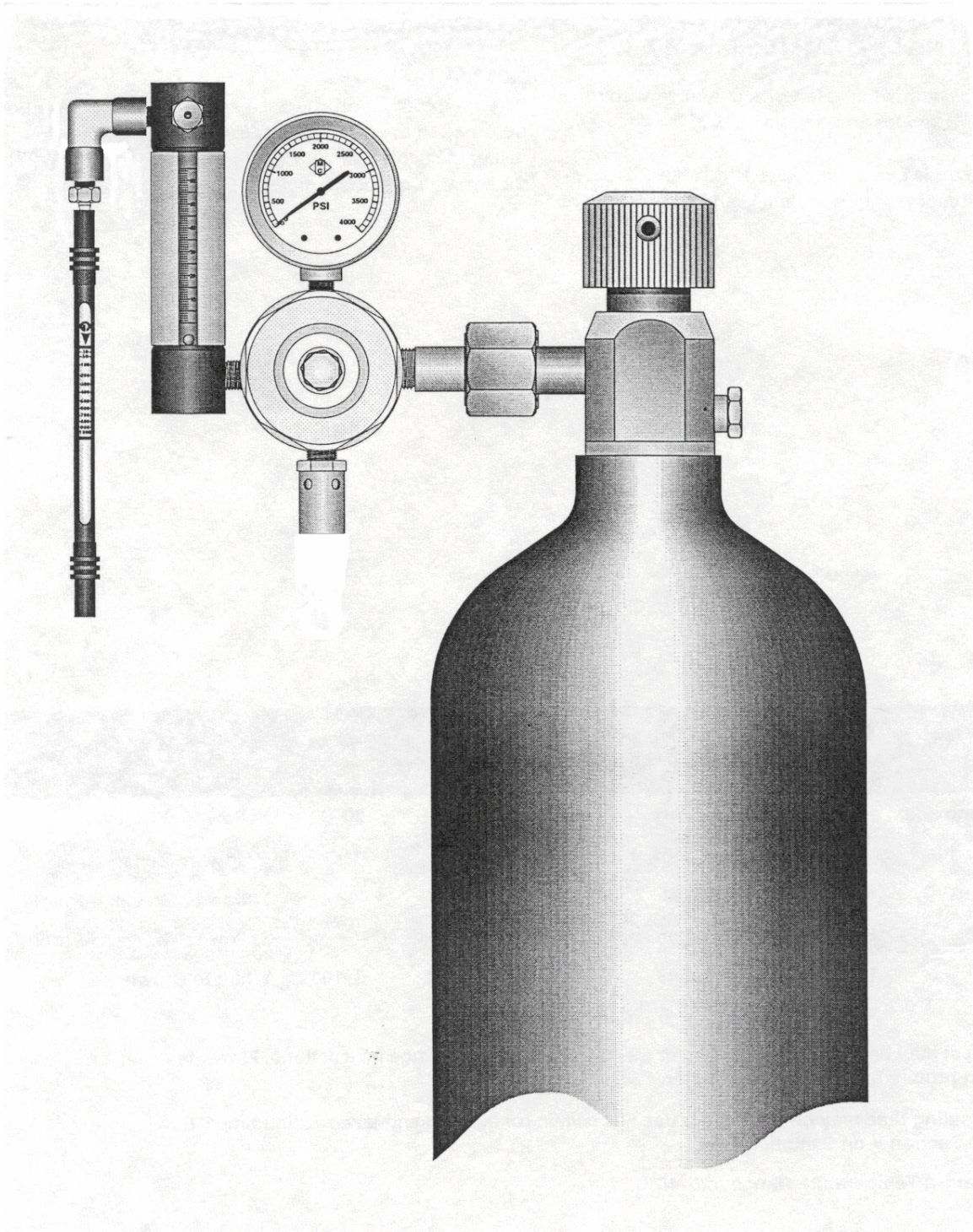
\* Oil Mist test may be run 1000 scc/min for 20 min as indicated in tube instructions.

Flow rates over 500 scc/min require a high range flow meter. However, Nextteq's Regulator has a maximum flow rate of 500 scc/min, so the oil mist tubes should run at a 500 scc/min for 40 minutes.

All tubes have a Temperature Range of 4-40°C.

# SECTION I: Introduction

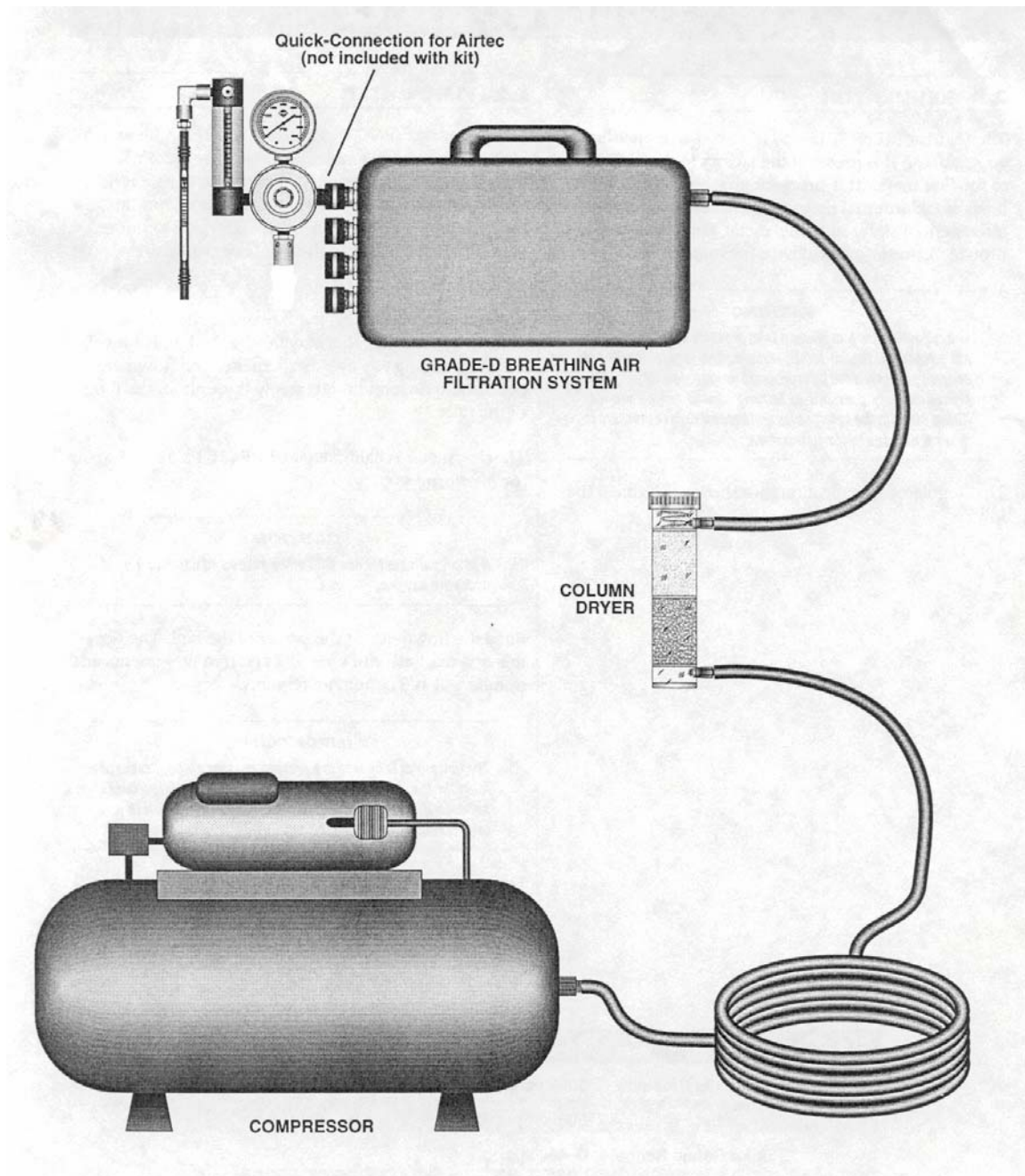
FIGURE 2  
AIRTEC & BOTTLED AIR





# SECTION I: Introduction

**FIGURE 3**  
**AIRTEC & COMPRESSED AIR**



# SECTION II: Airtec Kit Components

## 2.1 REGULATOR

The regulator is a two-stage breathing air regulator. It is preset at the factory to deliver 50 psig to the flow meter. It is precision-machined from solid brass stock. Internal parts are protected by a double filter system of sintered Monel metal, backed by sintered bronze. A preset safety device prevents overloading.

### **Warning**

*The regulator has a maximum inlet pressure of 3000 psig. Do not exceed maximum inlet pressure. The regulator will not operate properly if the inlet pressure drops below 50 psig. The preset delivery pressure of 50 psig should not be altered. Above 60 psig, the safety valve will vent off excess pressure to prevent damage to the flow meter.*

The Regulator specifications are shown in Table 3 (below).

## 2.2 FLOWMETER

The flow meter is a ball and tube assembly equipped with a metering valve. The system is backpressure compensated to maintain constant flow when downstream pressure fluctuations occur. It is calibrated for a delivery pressure of 50 psig and for readings at

the center of the ball (refer to Figure 4, page 17)

For maximum accuracy, the flow meter should be mounted vertically. This may be checked with a level, although setting “by eye” is adequate. The flow meter ball should float and rotate freely throughout the length of the tube.

The flow meter is calibrated a 70°F (21.1°C) and 50 psig for breathing air.

### **Caution**

*It is not suitable for use with other gases and cannot be used with pure oxygen.*

Read the flow meter at the center of the ball. The flow meter is marked with lines at 25 cc/min increments and numbers at 100 cc/min increments.

### **Important**

*The flow meter is housed in a pressurized cover tube. Cracks or leaks in the cover tube will affect system accuracy. Leaks between the flow meter and the tube holder will result in low tube readings.*

Flow meter specifications are shown in Table 4 (page 17).

**TABLE 3  
REGULATOR SPECIFICATIONS**

ITEM	SPECIFICATION
Maximum Inlet Pressure	3000 psig
Outlet Pressure	50 psig preset
Inlet Gauge Range	0-4000 psi
Inlet Connection	CGA 346 (CGA – 590 available)





# SECTION III: Testing Procedure

---

## 3.1 INTRODUCTION

---

The Airtec kit is equipped with a CGA 346 fitting for breathing air bottles. This fitting is specified by the compressed Gas Association to be used only for breathing air bottles. The Airtec Kit may also be used for filtration and carbon monoxide removal devices, by providing a quick disconnect near the respirator hookup. See Figure 3 (page 15). Refer to section 3.3 (page 20) for details on monitoring compressor-supplied systems.

---

## 3.2 BOTTLED BREATHING AIR

---

The following test procedure should be followed when testing bottled breathing air.

- 1) Open the bottle valve momentarily to blow away any foreign material that may have accumulated inside the connection.
- 2) Connect the regulator to the breathing air bottle and tighten it with an appropriate wrench. (The fitting takes a 1-1/8" open-end wrench). The flow meter should be mounted vertically for maximum accuracy. Close the adjustment knob by turning it fully clockwise (do not over tighten), then open it 2 turns counterclockwise.

---

### **Warning**

*Do not over tighten the regulator fitting. Severe over tightening will cause distortion of the threads and/or seating surface.*

---

- 3) Open the bottle valve completely and read the gauge pressure on the regulator. The pressure should be no less than 150 psig and no more than 3000 psig.
- 4) Adjust the flow meter needle valve momentarily to assure the flow meter ball move freely throughout the entire length of the tube. Shut off flow meter valve (turn it counter-clockwise to open and clockwise to close).

---

### **Warning**

*Do not over tighten the flow meter needle valve. Over tightening will damage the fine internal threads and sensitive metering seat! The needle valve NEVER needs to be closed tightly.*

---

## SECTION III: Testing Procedure

- 5) Break the end off of a fresh tube and install it in the tube holder. Note the directional arrow. Hold the tube holder in place with your free hand during stretching. The arrow should point away from the flow meter (or downward in the normal configuration). The tube is installed by first inserting the upper end into the holder then stretching the holder over the lower end of the tube.

---

### **Warning**

*Avoid cuts from broken tubes during this operation.*

---

---

### **Caution**

*Excessive stretching of the tube holder will shorten the useful life of the tube holder. Take care to install the tube with minimal stretching of the holder.*

---

- 6) Set the flow rate and start timing the sample as quickly and smoothly as possible. This may seem difficult at first, but smoothness will come with experience. Start with a 1-minute test (H<sub>2</sub>O) first. See table 2 (page 13). Read the *center* of the ball.
- 7) At the end of the time period, immediately read the tube and record the results. Repeat with the other tubes until all of the desired contaminants have been monitored. Consult your tube instructions for details on sample time flow rate. See Section 5.1 (page 22) for tips on sampling.
- 8) Close the valve on the air bottle and open the flow meter valve to bleed residual pressure off the Airtec system. Be sure the pressure is completely removed.
- 9) Disconnect the Airtec regulator/flow meter system and store in a clean dry place. *Do not leave it in the field.*

---

### **Warning**

*Do not attempt to remove the Airtec regulator from a breathing air source while the regulator is under source pressure!*

---

---

### **Important**

*Some bottled breathing air is prepared by blending liquid N<sub>2</sub> and liquid O<sub>2</sub> at 79% and 21% respectively. Oxygen content should be monitored when this type of breathing air is used. Nextteq LLC recommends the use of an oxygen tube with pump and sampling bag.*

---

---

### **Warning**

*The Airtec system should be checked for leaks on a routine basis. This may be done by applying soap solution around the connections. The critical area to check is between the flow meter and the tube holder. See Section 4.1 (page 21).*

---

# SECTION III: Testing Procedure

## 3.3 COMPRESSOR SYSTEMS

The Airtec Kit may also be used for monitoring compressed breathing air systems. See Figure 3 (page 15). The Airtec System should be placed as close as possible to the respirator hookup. The line pressure must be above 50 psig in order for the flow meter to work properly. The test procedure is the same as that for bottled air outlined in Section 3.2 (page 18).

To use the Airtec System with a compressed air system, prepare an adapter as outlined below in a or b.

- a) In the sample line near the respirator hookup install a valve and a CGA 346 connection. The connection may be obtained from your local compressed gas supplier. It is the type used on breathing air bottles.
- b) Prepare a quick disconnect adapter in the following manner. Obtain a CGA 346 bottle connection from your local compressed gas supplier. Attach it in a leak-tight manner to a quick disconnect fitting from one of your respirators. Your Airtec System may now be connected directly into your respirator hookup.

---

### **Warnings**

*Take precautions against water entry into the regulator. Use line pressure to blow the connector out prior to regulator hookup.*

*Be sure that the weight of the Airtec regulator/flow meter is properly supported during testing.*

*Be sure that the adapters are leak tight and capable of handling line pressure.*

*Federal Register 29 CFR Part 1910.134 (d) (2) (ii) states that breathing air systems employing an oil-lubricated compressor must employ a carbon monoxide alarm, a high temperature alarm, or both. The Airtec System does NOT substitute for a CO or a high temperature alarm. (If only a high temperature alarm is used, frequent CO testing is required. The Airtec System is suitable for such testing.)*

Filtration systems utilized in purifying air from oil-lubricated compressors employ a catalyst to convert CO to CO<sub>2</sub>. Note the following items:

- a) The catalyst is ruined if contacted by water and will no longer be effective.
- b) If CO levels increase sharply between tests, this could be an indication of CO intrusion or production in the compressor.

---

### **Warning**

*Most CO intrusion into compressed breathing air systems is caused by a CO source near the compressor inlet. Never operate motorized vehicles near the inlet of a breathing air compressor!*

---

# SECTION IV: Maintenance & Troubleshooting

---

## 4.1 TESTING FOR LEAKS

---

The Airtec System will provide maximum accuracy only if the system is leak free. Test for leaks by applying a soap solution to system connections while the unit is under normal operating pressure. If a leak is detected, tighten the fitting slightly and retest. Repeat until the leak is stopped.

---

### *Warning*

*Do not over tighten connections. Return unit to factory if leaks persist.*

---

Below is a list of potential leak sites that would have a direct effect on tube accuracy.

- Tube holder fitting
- Regulator/flow meter fitting
- Flow meter needle valve
- Flow meter cover tube

Leaks upstream (e.g. regulator fitting) although undesirable should not affect system accuracy.

---

### *Note*

*Following leak checks allow 500 cc/min to flow through the flow meter for 10 minutes to remove any moisture accumulation.*

---

---

### *Note*

*Leak checks should be run 500 cc/min with a used tube in place (use tube #109AD).*

---

---

## 4.2 EQUIPMENT FAILURE

---

In the event of failure of the regulator or flow meter return the unit to Nextteq LLC for servicing. Do not attempt to repair either the regulator or the flow meter. For information on equipment returns, see Appendix B: Returned Material Authorization (page 24).

# SECTION V: Sampling Tips

## Tips for Tube Reading

The following items will be helpful when reading and interpreting the Airtec detector tubes.

- 1.) Always read the tubes and record the results immediately after testing. In some cases stains may fade or “crawl” within a few hours.
- 2.) A tube may never be reused, even after a zero reading.
- 3.) The oil mist tube is normally used at 500 scc/min for 40 minutes. However, reliable results can be obtained using shorter sampling periods and correcting the reading with a multiplication factor (see below):

### Test Duration

20 minutes

### Multiply Reading By

2

- 4.) If at the end of a test you note that the stain has overshoot the scale, the actual concentration may be determined as follows:
  - a) Repeat the test with a new tube and observe the time required to reach the highest calibration mark (full scale).
  - b) Multiply the full-scale concentration by the ratio of the recommended test time to the actual test time.

### **Example**

H<sub>2</sub>O tube reaches full scale (80 mg/m<sup>3</sup>) in 36 seconds. Recommended time is 1 minute.

$$\text{Ratio} = 1 \text{ min} / 0.6 \text{ mins.} = 1.66$$

Thus, the actual concentration is

$$80 \times 1.66 = 133 \text{ mg/m}^3$$

## SECTION V: Sampling Tips

- 5.) Excessive water vapor (i.e.,  $>3$  mg/l of  $H_2O$ ) will cause the reagent in the oil mist tube (PN 109AD) to stain yellow although the reading will not be affected. Run the water vapor test before running the oil mist test. The recommended testing priority is listed below.
- 1<sup>st</sup> ..... $H_2O$
  - 2<sup>nd</sup> ..... $CO_2$
  - 3<sup>rd</sup> ..... $CO$
  - 4<sup>th</sup> .....Oil Mist
- 6.) The proper stain color for oil mist tube is dark brown. Other color changes should be disregarded.
- 7.) Moisture intrusion in the oil mist tube (PN 109AD) causes a bleaching of the reagent (see #5 above). If a stain is obtained on oil mist tube and a bleaching has occurred around the zero, read the stain and ignore the bleaching.
- 8.) The  $H_2O$  tube (PN 6A) responds to water vapor with either a green or a purple Stain. The green color merely signifies the presence of water vapor. It is not related to the concentration and should be ignored. Read only the purple stain.
- 9.) The reading on the  $H_2O$  tube should be recorded *immediately*. When the tube is removed it will continue to respond to ambient moisture. Similarly, place the tube in the holder as soon as possible after the ends have been broken.
- 10.) Always pay strict attention to the instruction sheets provided in the tube boxes. Detector tubes have limits on temperature and humidity.
- 11.) Accuracy in detector tube testing is  $\pm 25\%$

# Appendices

## Parts List

Part Number	Item/Description
STD-300	Airtec Kit
357	Tube Holder
STD-300-M	Airtec Manual
STD-300-1	Hard Shell Case (For Deluxe Airtec Kit)
1A	Carbon Monoxide Detector Tube
2AG	Carbon Dioxide Detector Tube
6A	Water Vapor Detector Tube
6AG	Water Vapor High Range Detector Tube
109AD	Oil Mist Detector Tube

## Returned Material Authorization

Nextteq LLC maintains an instrument service facility at the factory to provide its customers with both warranty and non-warranty repair service. Nextteq LLC, assumes no liability for service performed by personnel other than Nextteq personnel. To facilitate the repair process, please contact the Nextteq Customer Service Department for assistance with problems, which cannot be remedied on site. All returned products require a Returned Material Authorization (RMA) number prior to returning product to the factory. Nextteq LLC customer service personnel may be reached at:

**Nextteq LLC**

**8406 Benjamin Rd., Suite J**

**Tampa, FL 33634**

**(813) 249-5888; (877) 312-2333**

**Fax (813) 249-0188; (877) 312-2444**

All non-warranty repair orders will have a minimum fee whether the repair is authorized or not. This fee includes handling, administration and technical expenses for inspecting the instrument and providing an estimate. However, the estimate fee is waived if the repair is authorized.



# Appendices

If you wish to set a limit to the authorized repair cost, state a “not to exceed” figure on your purchase order. Please indicate if a price quotation is required before authorization of the repair cost, understanding that this invokes extra cost and handling delay. Nextteq LLC’s repair policy is to perform all needed repairs to restore the instrument to its full operating condition.

Repairs are handled on a “first in-first out” basis. Your order may be expedited if you authorize an expediting fee. This will place your order next in line behind orders currently in process.

Pack the instrument and its accessories (preferably in its original packing) and enclose your return address, purchase order, shipping and billing information, RMA#, a description of the problem encountered with your instrument and any special instructions. All prices are subject to change without notice.

If this is the first time you are dealing directly with the factory, you will be asked to prepay or authorize a COD shipment.

Send the instrument, prepaid, to:

**Nextteq LLC**  
**8406 Benjamin Rd., Suite J**  
**Tampa, FL 33634**

**Attention: Customer Service Department**

**RMA: \_\_\_\_\_**

## **Service Options**

The Nextteq LLC Service Department offers you a variety of service options that will help to increase your user confidence while minimizing costly interruptions and maintenance costs. These options include initial training, on-site technical assistance, and full factory repairs. Nextteq LLC has developed several programs that will allow you to select just the right options that are best suited to your applications and needs. For further information, contact the Nextteq LLC Service Department.