

 **AQT-4**  
*Air Quality Analyzer*

- Mass Concentration of Contaminants**
- Pressure Dewpoint**
- Temperature**
- Pressure**



# Parker's Innovative Solution

**I**ntroducing Finite Filter Division's new AQT-4, the only all-in-one compressed air analyzer available that tests all four critical aspects of compressed air quality: Mass Concentration of Contaminants, Pressure Dewpoint, Temperature and Pressure.

**N**o longer are four separate instruments needed to measure these critical characteristics of compressed air. The AQT-4 utilizes a capacitance hygrometer to measure the dryness of the compressed air. A photometer also is included in the device allowing it to measure the concentration of oil, water, and particulate contamination in the air stream.

**N**ow available! The AQT-4 is a portable and lightweight device weighing only 15 pounds. It has a rugged die cast enclosure with convenient retractable carrying handles on either side. Fold-up legs tilt the unit upward for easier display panel visibility. Designed with the goal of being durable and trouble-free to use, the AQT-4 has no internal pump to wear out. It is designed to work with system pressure. Its internal valves operate only once each time the unit is turned on, yielding long life and a high MTBF (mean time between failure) rating.

**O**utput data is shown on an LCD display on the AQT-4's front panel and can be directed to a PC via the RS-232 serial port located on the unit's back panel. Included is a software package on CD-ROM that enables storage of data and the production of both graphical and tabular reports directly in a MS Windows 95 format.

**V**ariable set points and broad sensing capabilities are two of the AQT-4's outstanding features. For example, temperature can be sensed from as low as -22°F to as high as 175°F. Pressure can be measured from as low as 20 PSIG up to a maximum of 150 PSIG. The AQT-4 can sense pressure dew points from as high as 80°F which are typically encountered in compressed air systems without the benefit of an air dryer, down to as low as -49°F pressure dewpoint which is achievable with the aid of twin-tower regenerative air dryers. Contamination in the compressed air system can be measured in concentration levels ranging from parts per billion to 59 parts per million: a range of 4 decades. Units of measure and the selection of custom sub-ranges are chosen through the use of a touch pad on the unit's face.

**A**udible alarms can be programmed to indicate when the AQT-4 senses that the characteristics of the compressed air are outside of the adjustable set points. The microprocessor controlled AQT-4 can be easily programmed and operated with just five buttons. The digital display has a help menu and diagnostic codes for operator convenience. The AQT-4 can be plugged in to AC line power or can be operated on its internal battery which allows it to be truly portable. The battery is a sealed lead acid rechargeable type with 1.2 Ahr of power and two or more hours of run time. The AQT-4 automatically adjusts to virtually all standard electric current used worldwide with its 110 to 250 volts AC, 50/60 Hz fused power entry module.

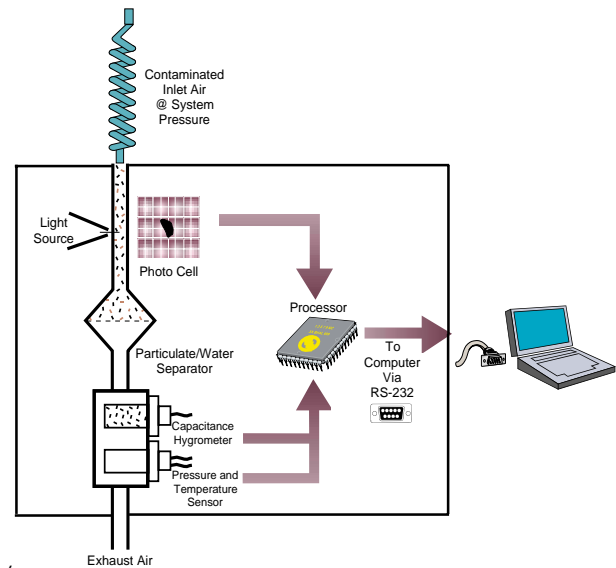
**T**ravel case, software and more are supplied with the AQT-4!!! For added durability and storage security, the device comes packed in a rugged travel case. The analyzer is also supplied with a power cord and quick disconnect adapters which allow the AQT-4 to be easily used in nearly all manufacturing settings. User friendly MS Windows 95 based software, an operations manual, and a quick reference guide are all included with the unit. The AK-1 accessory kit which includes an air nozzle, a 0.01 micron coalescing filter, and additional quick connect adapters is supplied with the unit.

**I**nstrumentation on the AQT-4 is self calibrating. The device zeros itself before each test and continuously runs self diagnostics. The AQT-4 utilizes a photometer with a dynamic range of 0.0001 to 50 milligrams per cubic meter.

**V**erify compressed air filtration efficiency, air dryer operating performance, and overall compressed air quality with Finite's new AQT-4. The AQT-4 is specifically designed to be used in conducting compressed air system audits for air system certification, the testing of high efficiency filters in-situ, and when performing filter element comparisons in real time.

**E**asy to use. Just connect the AQT-4 to a compressed air source of at least 20 PSIG by use of standard industrial quick connector fittings, turn on the device by means of the on/off switch located on the back panel, and let the AQT-4 do the rest. After zeroing itself, it begins reporting on the four characteristics in less than 2 minutes. When the testing is complete, the unit can be turned off, disconnected from the air source, and easily packed away.

## Operation Schematic



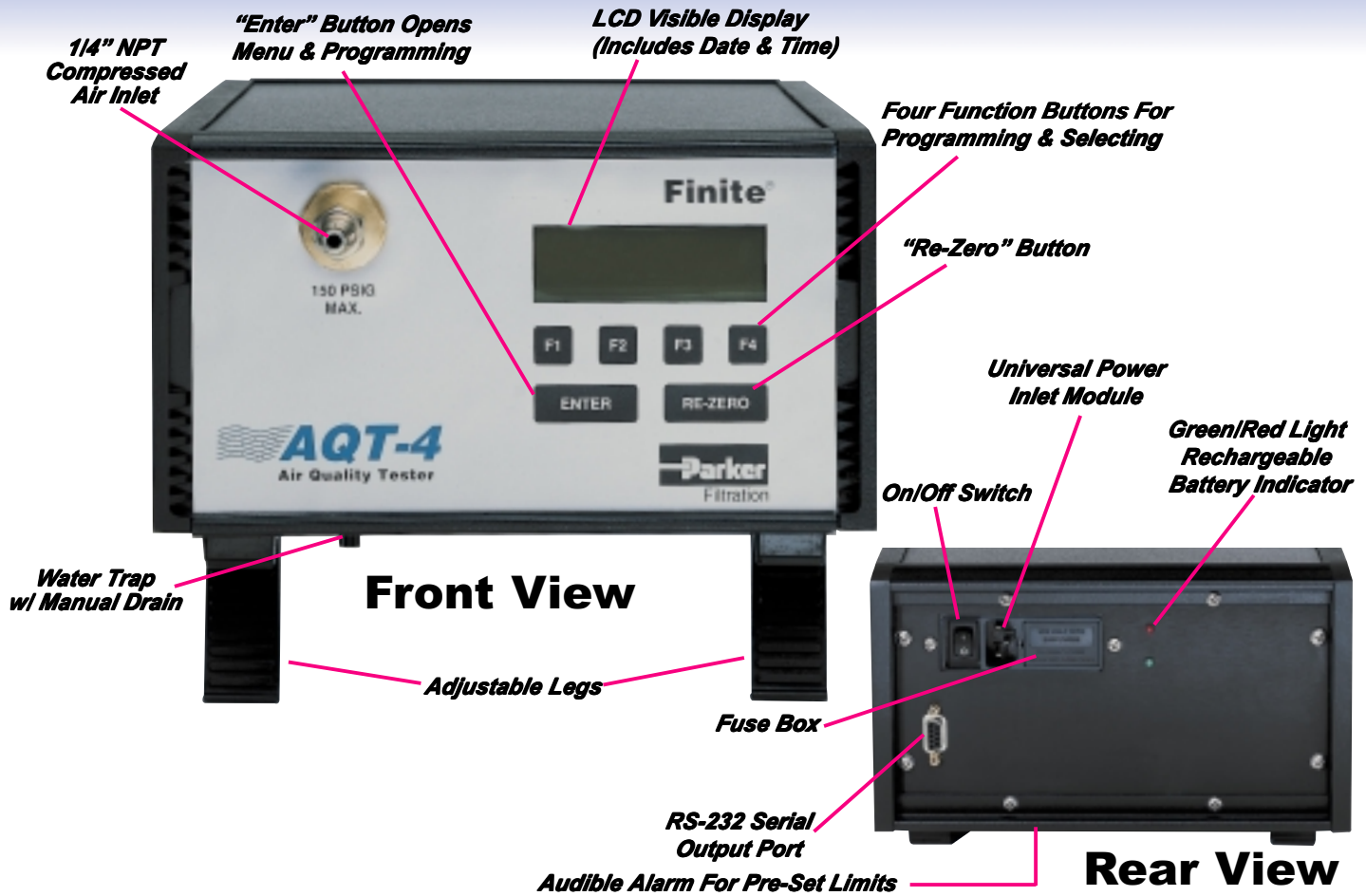
**Finite's AQT-4 is Parker's innovative SOLUTION to quickly and accurately assess compressed air quality.**

# *Compressed Air Quality Is A Major Concern . . . In Nearly All Industries*



- **Oil Refining**
- **Textile Manufacturing**
- **Paint Finishing Systems**
- **Food & Beverage Processing**
- **Pharmaceutical Manufacturing**
- **Petrochemical**
- **Pulp & Paper**

# Parker's Innovative AQT-4 Analyzer



## Complete Unit Includes:

- AQT-4 w/ Internal Rechargeable Battery
- Universal Power Cord
- 9 Pin Null Modem Cable
- Rugged Travel Case
- Coiled Pneumatic Hose
- Operator's Manual
- Quick Reference Sheet
- CD ROM Software
- Certification of Calibration
- AK-1 Accessory Kit

## AK-1 Accessory Kit (Included with unit)



# Specifications & Software

## Size:

Width = 9.5" (24 cm)  
 Height = 5.0" (12.7 cm)  
 Length = 13.5" (34.3 cm)

**Weight:** 15 lbs. (6.8 kg)

**Enclosure:** Rugged, die-cast aluminum with two convenient retractable carrying handles.

## Power

**Line:** 110 to 240 volts AC, 50/60 Hz fused power entry module. Automatically adjusts to virtually all standard electric current used worldwide. This unit has obtained CE approval.

**Battery:** Sealed lead acid type with 1.2 Ahr capacity for 2 or more hours of run time.

**Alarms:** Audible alarms in unit sound when adjustable set points are exceeded. An asterisk (\*) displays on LCD readout when out of range.

**Photometer:** The light source for the photometer is a solid state device that is stable, generates little heat, conserves power, and is long lasting (50,000 - 100,000 hours). The AQT-4 utilizes a photometer with a dynamic range of 0.0001 to 50 milligrams per cubic meter. Its photometer has a repeatability rating of 0.5% full scale and an accuracy rating of 1% full-scale.

**Capacitance Hygrometer:** Utilizes a capacitive sensor with fast response times and quick recovery times from high humidity conditions.

## Analyzer Functions

## Range

## Accuracy

**Contaminant Detection**  
**Pressure**  
**Temperature**  
**Pressure Dew Point**

0.0001 to 59 ppmw (0.0001 to 50 mg/m<sup>3</sup>)  
 20 to 150 PSIG (1.4 to 10.3 bar)  
 -22 to 175 °F (-30 to 79 °C)  
 -49 to 80 °F (-45° to 27 °C)

+/- 1% FSO\*  
 +/- 1% FSO\*  
 +/- 0.5% FSO\*  
 +/- 2° C (-20° C to 27° C)

\*Accuracy is shown as a percentage of Full Scale Output (FSO).

## Software

The AQT-4 Air Quality Analyzer is supplied with a complete software package that allows the user to record data points via computer. The computer is connected to the unit's RS-232 serial port located on the back panel. The AQT-4's MS Windows 95 based software, provided on CD-ROM, is easily installed. It allows the user to input location site,

choose measurement units, and select the duration of the testing. The data points are logged on a data collection table and are illustrated in a four function color graph. Both the data log and the test summary can be printed out on any printer.

## Program Display Formats



**Graphical Format**

Data Point	Date	Time	Air Temp	Press Dew Pt	Pressure	Cont Level
1	12/17/90	14:09	79.0	-49.4	15.9	0
2	12/17/90	14:10	80.1	-49.4	16.1	0
3	12/17/90	14:11	80.3	-49.4	16	0
4	12/17/90	14:12	80.5	-49.4	17	0.0007
5	12/17/90	14:13	80.7	-49.4	16.8	0.15
6	12/17/90	14:14	80.7	-49.4	16.5	0.004
7	12/17/90	14:15	80.3	-49.4	16.5	0
8	12/17/90	14:16	79.9	-49.4	16.7	0.0075
9	12/17/90	14:17	80	-49.4	14.7	0.0001
10	12/17/90	14:18	82.5	-49.4	14.9	0

**Tabular Format**

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