



86543-40

### Personal Air Sampling Pumps

**Tough, rugged, and reliable for sampling in difficult environments**

- High-intensity run/fault LEDs for error condition warning

Rubber over-molding, reinforced LCD window, and full gasket seal make this ideal for tough environments. Foam filter in the inlet port minimizes entry of fine dust particles. Easy four-button operation allows quick setup. Set flow rates down to 5 mL/min with the optional low-flow adapter—great for use with sorbent tubes.

**Tuff Standard Pump** is ideal for general sampling

and abatement applications. **Tuff Plus Pump** has features of standard model, plus displays flow set point, flow rate, sampled volume, and sample time. Also features fixed-run duration mode. **Tuff Pro Pump** has features of other models, plus offers TWA program mode, fixed duration, and delay start/stop modes. Log and download the last 100 events via infrared interface.

**What's included:** battery pack and battery charger. Model 86543-42 also includes a USB infrared receiver and software.

#### Specifications

##### Data displayed

Model 86543-40: flow rate  
 Models 86543-41 and -42: flow rate, flow set point, elapsed time, total volume sampled

**Operating temperature:** 40 to 113°F (5 to 45°C)

**Battery life:** 40 hours at 2 L/min, typical

**Tubing ID:** ¼" (6.4 mm)

**Dimensions (L x W x H):** 5¼" x 3½" x 1⅞" (13.3 x 8.7 x 4.7 cm)

Catalog number	Description	Flow range	Low flow range†	Pump wt	Power	Price
<a href="#">TW-86543-40</a>	Tuff Standard pump	0.8 to 4.5 L/min	0.005 to 0.75 L/min	17 oz (0.5 kg)	Rechargeable NiMH batteries with 115 VAC charger	
<a href="#">TW-86543-41</a>	Tuff Plus pump					
<a href="#">TW-86543-42</a>	Tuff Pro pump					

†0.005 to 0.75 L/min flow rate requires low-flow module below.

[TW-86543-43](#) Low-flow module

### Cole-Parmer® PVDF Gas Sampling Bags

**Corrosive-resistant PVDF for all your application needs**

- Strong seams for added durability

All standard models have either an on/off valve (⅜" nickel-plated brass hose barb) or a silicone septum in polypropylene housing; dual-valve models have both. Max temp: 160°F (71°C). Individually sealed in a dust-protected outer bag that also blocks out sunlight.

#### Standard PVDF Bags

Single-wide seam; available in 3-mil and 4-mil thick styles.

On/off valve		Septum valve		Volume	Dimensions (L x W)	
Cat. no.	Price	Cat. no.	Price		in.	cm
<b>Standard 3-mil bags</b>						
<a href="#">TW-01410-10</a>		<a href="#">TW-01410-30</a>		0.3 L	6 x 6	15.2 x 15.2
<a href="#">TW-01410-11</a>		<a href="#">TW-01410-31</a>		1.6 L	9 x 9	22.9 x 22.9
<a href="#">TW-01410-12</a>		<a href="#">TW-01410-32</a>		3.8 L	12 x 12	30.5 x 30.5
<a href="#">TW-01410-13</a>		<a href="#">TW-01410-33</a>		8.1 L	15 x 15	38.1 x 38.1
<a href="#">TW-01410-14</a>		<a href="#">TW-01410-34</a>		20.3 L	18 x 18	45.7 x 45.7
<a href="#">TW-01410-15</a>		<a href="#">TW-01410-35</a>		37.7 L	24 x 24	61.0 x 61.0
<a href="#">TW-01410-16</a>		<a href="#">TW-01410-36</a>		85.7 L	30 x 30	76.2 x 76.2
<b>Standard 4-mil bags</b>						
<a href="#">TW-01410-21</a>		—	—	1.6 L	9 x 9	22.9 x 22.9
<a href="#">TW-01410-22</a>		—	—	3.8 L	12 x 12	30.5 x 30.5
<a href="#">TW-01410-23</a>		—	—	8.1 L	15 x 15	38.1 x 38.1



#### Dual-Valve PVDF Bags

Single-wide seamed bags have both on/off and septum valves for convenient mixing.

Catalog number	Volume	Dimensions (L x W)		Price
		in.	cm	
<a href="#">TW-01410-50</a>	0.3 L	6 x 6	15.2 x 15.2	
<a href="#">TW-01410-51</a>	1.6 L	9 x 9	22.9 x 22.9	
<a href="#">TW-01410-52</a>	3.8 L	12 x 12	30.5 x 30.5	
<a href="#">TW-01410-53</a>	8.1 L	15 x 15	38.1 x 38.1	
<a href="#">TW-01410-54</a>	20.3 L	18 x 18	45.7 x 45.7	
<a href="#">TW-01410-55</a>	37.7 L	24 x 24	61.0 x 61.0	
<a href="#">TW-01410-56</a>	85.7 L	30 x 30	76.2 x 76.2	



01430-50

### FEP Sampling Bags

**Reusable bags resist damage from radiation and corrosive gases**

- Extra rugged—5 mil thick
- Resists temperatures up to 200°F (93°C)

Available in two styles—bags with on/off valve (⅜" nickel-plated brass hose barb) or with a silicone septum in a polypropylene housing. Max temp: 200°F (93°C). Thickness: 5 mil. Individually sealed in a dust-protected outer bag.

On/off valve		Septum valve		Volume	Dimensions (L x W)	
Catalog number	Price	Catalog number	Price		in.	cm
<a href="#">TW-01430-10</a>		<a href="#">TW-01430-50</a>		0.5 L	6 x 6	15.2 x 15.2
<a href="#">TW-01430-20</a>		<a href="#">TW-01430-60</a>		1.2 L	6 x 10	15.2 x 25.4
<a href="#">TW-01430-30</a>		<a href="#">TW-01430-70</a>		4.7 L	12 x 12	30.5 x 30.5
<a href="#">TW-01430-40</a>		<a href="#">TW-01430-80</a>		50.0 L	24 x 3	61.0 x 91.4

## Gas Sampling Accessories

**A Gas Washing Bottle** consists of a 250-mL polypropylene graduated cylinder with extended base, a 38-mm vinyl stopper with 1/4" OD tubes, and a removable gas dispersion fitting with 70-µm porosity polyethylene disc. Maximum pressure is 0.5 psi.

**B Gas Dispersion Tube** linear polyethylene bell-mouthed fitting has a sealed 70-µm porosity disc.

**C Glass Gas Sampling Bulbs** are designed for the collection and storage of environmental samples. Top cap with a PTFE/silicone septum lets you withdraw analytical samples. Both ends have a 4-mm valve plug and are ground to accept 3/8" ferrules and hand compressible fittings for a gas-tight seal. GPI thread size: 13-425.

Key	Catalog number	Description	Volume	Dimensions	Qty	Price
<b>A</b>	<a href="#">TW-06652-00</a>	Gas washing bottle	250 mL	Accepts tubes up to 1/4" OD	1 ea	
<b>B</b>	<a href="#">TW-06614-25</a>	Gas dispersion tube	—	12" (30.5 cm) L x 1" (2.5 cm) OD at bell, 3/8" OD tube	4/bg	
<b>C</b>	<a href="#">TW-10370-00</a>	Glass gas sampling bulb	125 mL	11 1/2" L x 3 1/2" W (29.2 x 8.9 cm)	1 ea	
	<a href="#">TW-10370-01</a>		250 mL	11 1/4" L x 3 3/4" W (29.8 x 9.5 cm)		



## Sampling Bags with Combination Valve

Single fitting features both on/off valve and septum port for added convenience

- Solid seam construction for added strength
- Corner opening with grommet allows tagging or hanging during transport and storage
- Includes certificate documenting lot compliance

Gas sampling bags are constructed 2-mil thick with a solid seam to keep gases contained. Unique, polypropylene combination valve features a 1/8" OD on/off stem suitable for tubing connections and integral PTFE/silicone septum for syringe sampling. Low permeability. Select from a variety of sizes to suit your needs.

Catalog number	Volume	Dimensions (L x W)		Qty/cs	Price/cs
		in.	cm		
<a href="#">TW-86561-00</a>	1 L	7 x 7	17.8 x 17.8	10	
<a href="#">TW-86561-02</a>	3 L	9 x 12	22.9 x 30.5	10	
<a href="#">TW-86561-04</a>	5 L	12 x 12	30.5 x 30.5	10	
<a href="#">TW-86561-06</a>	10 L	12 x 19	30.5 x 48.3	10	



Reinforced grommet is ideal for tagging or hanging bags.

## Air Sampler

Centrifugal motion draws sample at 40 L/min

- Ideal for air quality, clean area, and food and beverage applications
- Lightweight, compact design for portability and ease of use

This air sampler delivers reliable, reproducible results for applications assessing the quality of ambient air. Sampler operates on impaction principle, drawing airborne microorganisms onto an agar media strip for later incubation and analysis. Use keypad to adjust sample times: 0.5, 1, 2, 4, and 8 minutes; LED indicators provide visual indication of each sampling run. Rugged housing is chrome-plated brass with autoclavable, aluminum impeller blade and drum. Order batteries and agar strips separately below.

**What's included:** impeller assembly and carrying case.



Catalog number	Description	Head material	Dimensions (W x H x D)		Power	Price
			in.	cm		
<a href="#">TW-86509-00</a>	Hycon RCS air sampler	Aluminum	2 x 14 x 2	5.1 x 35.6 x 5.1	Four D batteries	



86509-00

[TW-09376-03](#) Batteries, D. Pack of 4

[TW-86509-60](#) Empty agar strips. Box of 50

[TW-86509-62](#) DG 18 agar strips. Box of 25

### Airborne Particle Counters

#### Displays particle count totals of multiple particle sizes at once

- Model 18450-25 features a color touch-screen display for quick and easy setup

Ideal for use in cleanrooms, indoor air quality, filter testing, and contamination migration studies. These handheld particle counters use a laser diode light source to detect particles between 0.3 and 10 µm. Ergonomic design allows one-handed portability. Both models feature automatic flow control, USB interface for data download, rechargeable batteries, high-impact housing, internal HEPA filter, and audible alarms.

**ErgoTouch** features three channels for multiple particle size counting (one channel is user selectable), data logger for up to 1500 records, intuitive interface, and a large backlit LCD. Select manual or automatic for the sampling modes.

**ErgoTouch Pro** features six channels (all user selectable), data logger for 10,000 records, color touch screen with Windows® CE operating system, and password protection. Sampling modes include manual, automatic, beep, concentration, cumulative/differential. Set a threshold alarm for each channel to alert you when a level of particles is exceeded. Store up to 100 groups of settings for processes that are used repeatedly. Generate reports based on ISO 14644-1, EU GMP, and FS 209-E protocols.

**Compliance:** NIST-traceable calibration report supplied by the manufacturer, ASTM F-50; also meets JIS standard for counting accuracy.

**What's included:** isokinetic inlet, rechargeable battery pack with charger, software, computer cable, and NIST-traceable calibration report supplied by the manufacturer. Model 18450-25 also includes a stylus for touch-screen interface.



18450-25

#### Specifications

ISO9001:2008 CERTIFIED SUPPLIER CE 2 year warranty 18450-25 only

**Flow rate:** 0.1 cfm

#### Display

- Model 18450-20: monochrome LCD
- Model 18450-25: color touch screen

**Minimum sensitivity:** 0.3 µm

**Illumination source:** laser diode

**Operating conditions:** 41 to 95°F (5 to 35°C), 20 to 95% RH (noncondensing)

**Power:** rechargeable lithium ion battery with 110 to 240 VAC charger

#### Battery life

- Model 18450-20: 2 hours continuous use
- Model 18450-25: 3 hours continuous use

#### Dimensions (W x H x D)

- Model 18450-20: 4¼" x 9½" x 2¾" (11 x 23 x 6.2 cm)
- Model 18450-25: 4½" x 10" x 3" (11.4 x 25.4 x 7.6 cm)

Catalog number	Description	Particle size	Memory	Output	Price
<a href="#">LZ-18450-20</a>	ErgoTouch	3 channels: 0.3, 5.0 µm, and user selectable from 0.5, 1.0, 2.0 or 2.5 µm	1500 data records	USB	
<a href="#">LZ-18450-25</a>	ErgoTouch Pro	6 channels: user selectable in 0.1 µm increments from 0.3 to 10.0 µm; calibrated at 0.3, 0.5, 1.0, 3.0, 5.0, and 10.0 µm	10,000 data records	USB and RS-232	



10103-28

### Handheld Particle Counter

#### Get volumetric concentration results in about 3 seconds

This laser-diode-based particle counter is ideal for use in controlled environments, indoor air quality studies, HVAC applications, filter testing, laboratory and manufacturing environments, and emissions sourcing. Get fast results—response time is 3 seconds, with twenty readings averaged over one minute for the final result. Control all functions through the two-button front panel.

Internal vacuum pump draws sample to the isokinetic inlet. Rechargeable batteries provide up to 30 hours of intermittent use or 12 hours of continuous use. Rubber boot protects the unit from bumps during use.

**What's included:** lithium-ion rechargeable battery pack, 100 to 240 VAC charger, and NIST-traceable calibration report supplied by the manufacturer.

#### Specifications

**Display:** two-line, 16 character LCD

**Minimum sensitivity:** 0.3 µm

**Illumination source:** laser diode

**Temperature range:** 32 to 122°F (0 to 50°C)

**Battery life:** 30 hours, intermittent; 12 hours, continuous

**Dimensions (W x H x D):** 3¾" x 6¾" x 2" (9.5 x 17.2 x 5.1 cm)

Catalog number	Description	Particle size	Flow rate	Power	Price
<a href="#">LZ-10103-28</a>	Handheld particle counter	0.3, 0.5, 1.0, 2.0, 5.0 µm	0.1 cfm (2.83 L/min)	Rechargeable lithium-ion battery with 100 to 240 VAC charger	

## Handheld Particle Monitor

### Monitor particulate concentrations in your clean room

Handheld particle monitor features five size ranges that can be selected from the front panel. Monitor detects 0.3 µm or greater sized particles at concentrations from 0 to 3,000,000 particles per cubic foot. The built-in rate counter provides a series of six-second count periods, each period is extrapolated to provide a concentration per sample volume. Results are shown on the 16-character LCD.

**What's included:** zero particulate filter, isokinetic probe, RS-232 cable, carrying case, rechargeable NiMH battery and AC adapter.

### Specifications

**Display:** LCD  
**Illumination source:** laser diode  
**Output:** RS-232  
**Temperature range:** 32 to 122°F (0 to 50°C)

**Battery life:** 8 hours intermittent use;  
 5 hours continuous use  
**Dimensions (W x H x D):** 3 3/16" x 6 1/4" x 2"  
 (9.3 x 15.9 x 5.1 cm)

Catalog number	Description	Particle size	Flow rate	Power	Price
<a href="#">TW-18460-00</a>	Handheld particle counter	0.3, 0.5, 1.0, 2.0, 5.0 µm	0.1 cfm (2.83 L/min)	Rechargeable NiMH battery with 100 to 240 VAC charger	



18460-00

## GasAlertClip™ Extreme Personal Monitors

### Compact and easy to use—no maintenance required!

Operated by an advanced microcontroller and electrochemical sensor, the GasAlertClip Extreme monitors provide continuous, maintenance-free operation for up to two years from the day of activation. These disposable battery-operated monitors are easy to use—simply clip the meter to your pocket or belt and go!

View important gas-reading information and detector life remaining data on the full-feature LCD display. No calibration is required for H<sub>2</sub>S or CO; O<sub>2</sub> self calibrates. Monitors feature audible, visible, and vibrating alarms. Each monitor is encased in a shock- and water-resistant ABS enclosure and offers RFI protection to withstand the rigors of industrial and field use.

GasAlertClip3 Extreme offers the same great features plus a three-year sensor.

**What's included:** alligator belt clip and calibration cap.



86383-03

### Approvals:

UL: Class I, Div. 1, A, B, C, D; Class I, Zone 0, Group IIC CENELEC: EEx ia IIC

### Specifications

**Alarm:** 95 dB at 1 ft (audible/visible/vibrating)

**Sensor life:** 2 years

**Functions:** low-battery indicator

**Display:** alphanumeric status panel



**Power:** 3 V lithium battery (included)

**Dimensions (W x H x D):** 2" x 3 1/4" x 1" (5.1 x 8.3 x 2.5 cm)

**Instrument wt:** 4 oz (0.1 kg)

Catalog number	Sensor	Range	Accuracy	Alarm set points		Price
				Low	High	
<b>GasAlertClip with 2-year sensor</b>						
<a href="#">TW-86383-05</a>	O <sub>2</sub>	0 to 30%	±0.1%	19.5%	23.5%	
<a href="#">TW-86383-01</a>	CO	0 to 300 ppm	±1 ppm	35 ppm	200 ppm	
<a href="#">TW-86383-03</a>	H <sub>2</sub> S	0 to 100 ppm	±0.3 ppm	10 ppm	15 ppm	
<a href="#">TW-86383-07</a>	SO <sub>2</sub>	0 to 100 ppm	±1 ppm	5 ppm	10 ppm	
<b>GasAlertClip3 Extreme with 3-year sensor</b>						
<a href="#">TW-86383-11</a>	CO	0 to 300 ppm	±1 ppm	35 ppm	200 ppm	
<a href="#">TW-86383-09</a>	H <sub>2</sub> S	0 to 100 ppm	±0.3 ppm	10 ppm	15 ppm	

## GasAlert™ Extreme Single-Gas Detectors

### Simple four-button operation

The easy-to-read LCD shows continuous real-time gas concentrations and instrument status. The detectors feature simple auto zero and calibration procedures. All models feature a 90 dB alarm and bright LED to warn you of the presence of hazardous conditions. The LOW, HIGH, and TWA alarms have adjustable set points; peak values can be displayed on demand. The full function

self-test verifies sensor, circuit, and battery integrity and activates the audible/visual/vibrating alarms each time you turn on the instrument.

**What's included:** pocket/belt clip, test cap and hose, and 3 V lithium battery.

**Approvals:** UL Class I, Div. 1, Groups A, B, C, D; CE

### Specifications

**Alarm**  
 Audible: 95 dB at 1 ft  
 Visual: dual red LEDs  
 Optional: vibrating

**Sensor life:** 2 years

**Functions:** TWA, peak, adjustable alarm set points, low battery indicator

**Display:** backlit LCD  
**Power:** 3 V lithium battery (included)  
**Battery life:** 2 years  
**Dimensions (W x H x D):** 2" x 3 3/4" x 1" (5.1 x 9.5 x 2.5 cm)  
**Instrument wt:** 4 oz (0.1 kg)



81991-13

Catalog number	Sensor	Range	Resolution	Alarm set points		Price
				Low	High	
<a href="#">TW-81991-15</a>	O <sub>2</sub>	0 to 30%	0.1%	19.5%	23.5%	
<a href="#">TW-81991-11</a>	CO	0 to 999 ppm	1 ppm	35 ppm	200 ppm	
<a href="#">TW-81991-13</a>	H <sub>2</sub> S	0 to 100 ppm	1 ppm	10 ppm	15 ppm	
<a href="#">TW-81991-17</a>	SO <sub>2</sub>	0 to 100 ppm	1 ppm	2 ppm	5 ppm	

### Personal Single-Gas Detectors

#### Fully serviceable and reusable detector with real-time readings

This fully serviceable and reusable personal gas detector features real-time Peak, STEL, and TWA readings. Detector also stores the last 20 events. Detectors also feature audible, visual, and vibrating alarms which are set off for Low, High STEL, and TWA readings. Unit also exceeds IEC 6100-4-3 for level 3 RFI immunity specifications.

**What's included:** heavy-duty alligator clip and calibration adapter.



62864-04



#### Specifications

**Alarm:** 92 dB audible, LED visual, and vibrating  
**Functions:** low, high, STEL, and TWA

**Display:** backlit LCD  
**Power:** 3 V lithium battery (included)

**Instrument wt:** 3.9 oz  
**Dimensions (W x H x D):** 2¼" x 3½" x 1¼" (5.7 x 8.4 x 3.2 cm)

Sensor	Range	Resolution	Alarm set points		Single-gas detectors	
			Low	High	Cat. no.	Price
O <sub>2</sub>	0 to 30%	0.10%	19.5%	23.5%	<a href="#">TW-62864-00</a>	
CO	0 to 1000 ppm	1 ppm	35 ppm	200 ppm	<a href="#">TW-62864-02</a>	
H <sub>2</sub> S	0 to 200 ppm	1 ppm	10 ppm	15 ppm	<a href="#">TW-62864-04</a>	
SO <sub>2</sub>	0 to 50 ppm	0.1 ppm	5 ppm	10 ppm	<a href="#">TW-62864-06</a>	

### Gasman Single-Gas Detectors

#### Data log and download up to 3000 hours with time and date stamp

- Rechargeable lithium-ion battery for 12 hours of operation
- Rugged housing is IP 65/67 rated for dust and water resistance

Small size and light weight ensure the detectors are comfortable to wear all day long. Visible flashing LED, audible 85 dB, and vibrating alarms quickly alert the wearer to potential gas hazards. Data is recorded by the detector and can be downloaded to a PC or printer using the adapter/PC interface (sold separately at right).

**Approvals:** UL and cUL Class I, Div. 1, Groups A, B, C, D (pending); ATEX; CE

**What's included:** calibration cap, pocket clip, and rechargeable lithium-ion battery.



86550-00

#### Specifications



**Alarm:** 85 dB (audible), visible, vibrating

**Sensor life:** 2 years

**Functions:** STEL, TWA, peak hold, zero, low-battery indicator

**Display:** backlit LCD

**Power:** rechargeable lithium-ion

**Battery life:** 12 hours

**Dimensions (W x H x D):** 2" x 4" x 1¼" (5.1 x 10.2 x 3.2 cm)

**Instrument wt:** 4 oz (0.1 kg)

Catalog number	Sensor	Range	Resolution	Alarm set points		Price
				Low	High	
<a href="#">TW-86550-00</a>	O <sub>2</sub>	0 to 25%	0.1%	19.5%	23.5%	
<a href="#">TW-86550-02</a>	CO	0 to 500 ppm	1 ppm	30 ppm	—	
<a href="#">TW-86550-04</a>	H <sub>2</sub> S	0 to 250 ppm	1 ppm	5 ppm	20 ppm	
<a href="#">TW-86550-06</a>	LEL	0 to 100%	1%	20% LEL	—	
<a href="#">TW-86550-08</a>	SO <sub>2</sub>	0 to 10 ppm	0.1 ppm	2 ppm	—	
<a href="#">TW-86550-10</a>	NO	0 to 100 ppm	1 ppm	25 ppm	—	
<a href="#">TW-86550-12</a>	NO <sub>2</sub>	0 to 10 ppm	0.1 ppm	1 ppm	—	
<a href="#">TW-86550-14</a>	O <sub>3</sub>	0 to 1 ppm	0.1 ppm	0.5 ppm	—	

[TW-86550-50](#) Adapter/PC interface, 110 VAC

[TW-86550-51](#) Adapter/PC interface, 230 VAC European

### GasAlertQuattro Single-Gas Detectors

#### IntelliFlash green LED verifies operation and compliance to user and supervisor

- Bright, extended visual alarm bars for viewing at any angle

Compact and lightweight design makes these gas detectors comfortable to wear all day. Verify operation from a distance by looking for the IntelliFlash green LED with user-defined flash frequency. Additional features include one-button operation, data/event logging, audible/visual/vibrating alarms, user adjustable alarm set points, sensor self-test, and multilanguage capability (English, French, German, Spanish, and Portuguese). Select from units powered with rechargeable or alkaline batteries.

**Approvals:** CE; CSA Class I, Div. 1, Groups A, B, C, D; ATEX

**What's included:** calibration cap and tubing, and either rechargeable Li battery pack or three AA alkaline batteries depending on model. Models with rechargeable battery pack also include a battery charger.

#### Specifications

**Alarm:** 95 dB (audible), visible, vibrating

**Sensor life:** 2 years

**Functions:** data logging, event logging, STEL, TWA, low, high, and over limit

**Display:** backlit LCD, with flip display capability

**Power/battery life:** rechargeable battery pack: 20 hours; alkaline batteries: 14 hours

**Dimensions (W x H x D):**

5½" x 3¼" x 1½"  
(12.9 x 8.0 x 3.8 cm)

**Instrument wt:** 11.2 oz (317 g)



86419-10

Order accessories for GasAlertQuattro on page 7.

Sensor	Range	Resolution	With rechargeable batteries		With alkaline batteries	
			Catalog number	Price	Catalog number	Price
O <sub>2</sub>	0 to 30%	0.1%	<a href="#">TW-86419-10</a>		<a href="#">TW-86419-08</a>	
CO	0 to 1000 ppm	1 ppm	<a href="#">TW-86419-22</a>		<a href="#">TW-86419-20</a>	
H <sub>2</sub> S	0 to 200 ppm	0.1 ppm	<a href="#">TW-86419-18</a>		<a href="#">TW-86419-16</a>	
LEL	0 to 100%	1%	<a href="#">TW-86419-14</a>		<a href="#">TW-86419-12</a>	

[TW-17102-22](#) NIST-traceable calibration



## GasAlertQuattro Multigas Detectors

### IntelliFlash green LED verifies operation and compliance to user and supervisor

- Bright, extended visual alarm bars for viewing at any angle

Test multiple gases with one instrument using these two-, three-, and four-gas detectors. Compact and lightweight design makes them comfortable to wear all day. Continuous LCD displays real-time gas concentrations. Built-in concussion-proof boot and IP66/67 rating makes these detectors suitable for field use. Verify operation from a distance by looking for the IntelliFlash green LED with user-defined flash frequency. Additional features include one-button operation, data/event logging, audible/visual/vibrating alarms, user adjustable alarm set points, sensor self-test, and multilanguage capability (English, French, German, Spanish, and Portuguese). Select from units powered with rechargeable or alkaline batteries.

**Approvals:** CE; CSA Class I, Div. 1, Groups A, B, C, D; ATEX

**What's included:** calibration cap and tubing, and either rechargeable Li battery pack or three AA alkaline batteries depending on model. Models with rechargeable battery pack also include a battery charger.

### Specifications

Sensor	Range	Resolution
O <sub>2</sub>	0 to 30%	0.1%
Combustibles	0 to 100% LEL	1% LEL
CO	0 to 1000 ppm	1 ppm
H <sub>2</sub> S	0 to 200 ppm	0.1 ppm

**Alarm:** 95 dB (audible), visible, vibrating

**Sensor life:** 2 years



**Functions:** data logging, event logging, STEL, TWA, low, high, and over limit

**Display:** backlit LCD, with flip display capability

**Power/battery life:** rechargeable battery pack: 20 hours; AA alkaline batteries: 14 hours

**Dimensions (W x H x D):** 5 1/8" x 3 1/4" x 1 1/2"  
(12.9 x 8.0 x 3.8 cm)

**Instrument wt:** 11.2 oz (317 g)

Gases measured	With rechargeable batteries		With alkaline batteries	
	Catalog number	Price	Catalog number	Price
Four-gas detector; O <sub>2</sub> , LEL, CO, H <sub>2</sub> S	<a href="#">TW-86418-62</a>		<a href="#">TW-86418-60</a>	
Three-gas detector; O <sub>2</sub> , LEL, H <sub>2</sub> S	<a href="#">TW-86418-66</a>		<a href="#">TW-86418-64</a>	
Three-gas detector; O <sub>2</sub> , LEL, CO	<a href="#">TW-86418-70</a>		<a href="#">TW-86418-68</a>	
Three-gas detector; O <sub>2</sub> , CO, H <sub>2</sub> S	<a href="#">TW-86418-74</a>		<a href="#">TW-86418-72</a>	
Three-gas detector; LEL, CO, H <sub>2</sub> S	<a href="#">TW-86418-78</a>		<a href="#">TW-86418-76</a>	
Two-gas detector; O <sub>2</sub> , LEL	<a href="#">TW-86418-82</a>		<a href="#">TW-86418-80</a>	
Two-gas detector; CO, H <sub>2</sub> S	<a href="#">TW-86418-86</a>		<a href="#">TW-86418-84</a>	
Two-gas detector; O <sub>2</sub> , H <sub>2</sub> S	<a href="#">TW-86418-90</a>		<a href="#">TW-86418-88</a>	
Two-gas detector; O <sub>2</sub> , CO	<a href="#">TW-86418-94</a>		<a href="#">TW-86418-92</a>	
Two-gas detector; LEL, H <sub>2</sub> S	<a href="#">TW-86418-98</a>		<a href="#">TW-86418-96</a>	
Two-gas detector; LEL, CO	<a href="#">TW-86419-06</a>		<a href="#">TW-86419-04</a>	



86418-60

### Accessories for GasAlertQuattro Detectors

[TW-86419-24 Confined-space kit](#) includes manual aspirator, IR connectivity, calibration cap with hose, regulator, sampling probe, carrying holster, and auxiliary filter

[TW-86419-26 Carrying case](#) with foam insert

[TW-86419-30 SamplerPak motorized sampling pump kit](#)

[TW-86419-28 External concussion-proof boot](#)

[TW-86419-32 Manual aspirator pump](#)

[TW-09376-01 Replacement alkaline batteries](#), AA. Pack of 4

[TW-17102-23 NIST-traceable calibration](#) with data

## GasAlertMicroClip XT Four-Gas Detector

### Performance of a multigas detector with the feel and simplicity of a single-gas detector

- Simple one-button operation
- IntelliFlash verifies operation and compliance to user and supervisor

Lightweight, compact detector is designed with a rugged housing with concussion-proof boot for your most demanding work environments. Continuous LCD shows simultaneous gas concentrations for H<sub>2</sub>S, CO, O<sub>2</sub>, and combustibles. Features four alarm levels: instant low and high alarm for all gases, TWA and STEL for CO and H<sub>2</sub>S, and an over-limit alarm. Verify operation from a distance by looking for the IntelliFlash green LED with user-defined flash frequency. Additional features include one-button operation, data/event logging, audible/visual/vibrating alarms, user-adjustable alarm set points, sensor self-test, and multilanguage capability (English, French, German, Spanish, and Portuguese).

**Approvals:** CE; CSA Class I, Div. 1, Groups A, B, C, D; ATEX

**What's included:** calibration hose/cap, stainless steel alligator clip, and rechargeable lithium-polymer battery.

### Specifications

Sensor	Range	Resolution
Combustibles	0 to 100% LEL; 0 to 5% by volume methane	1% LEL; 0.1% by volume methane
O <sub>2</sub>	0 to 30%	0.1%
CO	0 to 500 ppm	1 ppm
H <sub>2</sub> S	0 to 100 ppm	1 ppm

**Alarm:** 95 dB (audible), visible, vibrating

**Sensor life:** 2 years



**Functions:** data logging, event logging, STEL, TWA, low, high, and over limit

**Display:** backlit LCD

**Power:** rechargeable battery pack

**Battery life:** 10 to 12 hour run time

**Dimensions (W x H x D):** 2 1/16" x 4 7/16" x 1 1/8"  
(6.0 x 11.3 x 2.9 cm)

**Instrument wt:** 6 oz (170 g)

Catalog number	Description	Price
<a href="#">TW-86418-25</a>	Four-Gas detector	



86418-25

### Accessories

[TW-17102-23 NIST-traceable calibration](#) with data

### GasAlertMax XT II Four-Gas Detector

#### Integrated sampling pump for easy remote testing

This rugged unit features a nonintrusive integrated pump that improves remote sampling result accuracy—ideal for confined spaces! Continuous LCD shows real-time gas concentrations. One-button operation guarantees ease of use, even while wearing gloves. The tamper-proof, user-adjustable options enable the instrument to be customized to suit your specific application. Features four alarm levels: low and high alarm level for all gases, TWA and STEL for CO and H<sub>2</sub>S, and an over-limit alarm. Additional features include data/event logging, audible/visual/vibrating alarms, user adjustable alarm set points, sensor self test, and multilanguage capability (English, French, German, Spanish, and Portuguese).

**Approval:** CE; CSA Class I, Div. 1, Groups A, B, C, D; ATEX

**What's included:** 10-ft (3-m) calibration/sampling hose with filter, stainless steel belt clip, rechargeable lithium polymer battery, and battery charger.



81990-35

#### Specifications

Sensor	Range	Resolution
Combustibles	0 to 100% LEL; 0 to 5% by volume methane	1% LEL; 0.1% by volume methane
O <sub>2</sub>	0 to 30%	0.1%
CO	0 to 1000 ppm	1 ppm
H <sub>2</sub> S	0 to 200 ppm	1 ppm



**Display:** backlit LCD

**Power:** rechargeable lithium-ion battery pack

**Battery life:** 13 hour run time

**Dimensions (W x H x D):** 2 3/4" x 5 1/8" x 2"  
(7.0 x 13.1 x 5.2 cm)

**Instrument wt:** 11.5 oz (328 g)

**Alarm:** 95 (Audible) dB, visible, vibrating

**Functions:** data logging, event logging, STEL, TWA, low, high, and over limit

Catalog number	Description	Price
<a href="#">TW-81990-35</a>	Four-gas detector	

[TW-17102-23](#) NIST-traceable calibration with data for multigas detector

### GasAlertMicro 5 Multigas Detector with PID

#### Protect workers from the dangers of VOCs in confined spaces

■ Water-resistant design in a concussion-proof enclosure

Continuously monitor four gas concentrations with electrochemical sensors, along with volatile organic compounds (VOCs) using the photo ionization detector (PID). The GasAlertMicro 5 PID features four alarm levels: low and high alarms for all gases, time-weighted average (TWA) and short-term exposure limits (STEL) for VOC gases. Alarm levels are adjustable, activating audible, visual, and a vibration alarm for noisy environments.

Data logging model records all readings and alarm status, as well as date/time and unit serial number. Data is recorded on a MMC card; order optional card reader separately at right. Includes a motorized pump for remote sampling.

**Approvals:** CSA Class I, Div 1, Groups A, B, C, and D; ATEX; EEx ia IIC

**What's included:** rechargeable battery pack and charger. Model 10107-75 also includes motorized sampling pump and MMC data logging card.



10107-74

#### Specifications

Sensor	Range	Resolution	Alarm set points	
			Low	High
Combustibles	0 to 100% LEL	1%	10%	20%
O <sub>2</sub>	0 to 30%	0.1%	19.5%	23.5%
CO	0 to 999 ppm	1 ppm	35 ppm	200 ppm
H <sub>2</sub> S	0 to 100 ppm	1 ppm	10 ppm	15 ppm
PID (VOCs)	0 to 1000 ppm	1 ppm	50 ppm	100 ppm



**Alarm:** audible (95 dB), visible, vibrating

**Functions:** STEL, TWA, max. gas

**Display:** backlit, multiparameter LCD

**Power:** rechargeable lithium battery pack

**Battery life:** 15 hours exposure, low battery indicator

**Dimensions (W x H x D):** 2 7/8" x 5 3/4" x 1 1/2"  
(7.3 x 14.6 x 3.8 cm)

**Instrument wt:** 13.1 oz (72 g)

Catalog number	Description	Price
<a href="#">TW-10107-74</a>	Multigas Detector with PID	
<a href="#">TW-10107-75</a>	Data logging Multigas Detector with PID and pump	

## Automatic Test and Calibrations Systems

### Quick and easy compliance—automatically maintain accurate records

Manage the calibration and bump testing of your GasAlert portable gas detectors with these calibration systems. Simplifying the record keeping process, the MicroDock II creates accurate and user-friendly reports, prints receipts of calibration, sorts and graphs data, and archives information. Results are stored on the MMC card for easy download to your computer through the USB interface.

Also features automatic verification of audible and visual alarms. Calibrate multiple units by adding the appropriate docking modules (up to 10). Connect multiple MicroDock II systems via a LAN.

**What's included:** two calibration gas hoses, inlet filter assembly, 128 MB MultiMediaCard (MMC), USB cable, Fleet Manager II software, power adapter, four C batteries, and charging adapter (for modules with charging power supply only).

### Specifications

**Pump flow rate:** 300 mL/min (typical)  
**Module capacity:** up to 10 modules  
**Display:** backlit four-line LCD

**Operating conditions:** 50 to 95°F (10 to 35°C), 0 to 50% RH  
**Power:** four C batteries or 120 VAC adapter

**Dimensions (W x H x D), for base station plus one module:** 8<sup>9</sup>/<sub>16</sub>" x 10<sup>3</sup>/<sub>16</sub>" x 3<sup>3</sup>/<sub>16</sub>" (21.2 x 26.3 x 8.2 cm)



86419-51

Catalog number	Included module	Price
<b>Base station</b>		
<a href="#">TW-86419-51</a>	GasAlertClip Extreme H <sub>2</sub> S module	
<a href="#">TW-86419-52</a>	GasAlertClip Extreme CO module	
<a href="#">TW-86419-53</a>	GasAlertClip Extreme SO <sub>2</sub> module	
<a href="#">TW-86419-54</a>	GasAlertClip Extreme O <sub>2</sub> module	
<a href="#">TW-86419-55</a>	GasAlert Extreme module*	
<a href="#">TW-86419-56</a>	GasAlertQuattro module with charging power supply	
<a href="#">TW-86419-57</a>	GasAlertMicroClip module with charging power supply	
<a href="#">TW-86419-58</a>	GasAlertMax XT module with charging power supply	
<a href="#">TW-86419-59</a>	GasAlertMicro 5 module with charging power supply and two gas inlets*	
<a href="#">TW-86419-60</a>	GasAlertMicro 5 module with charging power supply and three gas inlets*	
<b>Additional docking modules</b>		
<a href="#">TW-86419-61</a>	GasAlertClip Extreme H <sub>2</sub> S docking module	
<a href="#">TW-86419-62</a>	GasAlertClip Extreme CO docking module	
<a href="#">TW-86419-63</a>	GasAlertClip Extreme SO <sub>2</sub> docking module	
<a href="#">TW-86419-64</a>	GasAlertClip Extreme O <sub>2</sub> docking module	
<a href="#">TW-86419-65</a>	GasAlertQuattro docking module with charging power supply	
<a href="#">TW-86419-66</a>	GasAlertMicroClip docking module with charging power supply	

\*Not compatible with ClO<sub>2</sub> or O<sub>3</sub>

[TW-86419-67](#) Demand flow regulator.

[TW-86419-68](#) Demand flow regulator with CGA connector for refillable cylinders

[TW-86419-69](#) Demand flow regulator for disposable steel cylinders

[TW-09376-02](#) Replacement batteries, C. Pack of 4

## SamplerPak Motorized Sampling Pump

### Add remote sampling capabilities to any GasAlert detector without an internal pump

Safely transfer potentially hazardous gasses from a sample area to a detector—increases safety by keeping your workers from entering a confined space. LED lights indicate proper operation, blocked airflow for calibration, or error condition. Audible alarm signals low flow, low battery, or system error. Check for system leaks by simply blocking the inlet. Works with most GasAlert single- and multigas detectors.

**What's included:** coiled hose, sampling hose, sampling tubes with barbed fittings, hard carrying case, and two AA alkaline batteries.

### Specifications

**Sample distance:** 50 ft (15.2 m) max

**Alarms:** visual and audible (90 dB) for low flow, low battery, system fault

**Operating conditions:** -4 to 122°F (-20 to 50°C), 5 to 95% RH noncondensing

### Power

Model 86419-30: two AA batteries  
Model 86543-61: two AA batteries or rechargeable NiMH batteries

**Dimensions (L x W x H):** 7<sup>7</sup>/<sub>8</sub>" x 1<sup>5</sup>/<sub>16</sub>" x 2<sup>1</sup>/<sub>8</sub>" (18.8 x 3.4 x 5.4 cm)



86543-60

Catalog number	Description	Flow range	Power	Price
<a href="#">TW-86419-30</a>	SamplerPak pump	300 mL/min	Two AA batteries	
<a href="#">TW-86543-61</a>	SamplerPak pump with rechargeable batteries		Two AA batteries or rechargeable NiMH batteries	

[TW-09376-01](#) Replacement batteries, AA. Pack of 4





86262-35

### USB PID Toxic Gas Detectors

#### PID gas detector with the convenience of a USB output

Ideal for indoor air quality studies, safety engineers, maintenance managers, leak detection applications, and more! Software allows you to set an alarm level to a specific ppm value and enable/disable audible alarms. Red blinking LED indicates an alarm condition has been reached; yellow blinking LED indicates an alarm condition that has passed.

Operate while connected to a computer capturing data through the USB port or use remotely, storing up to 36,000 readings in internal memory by using the optional rechargeable battery pack.

**What's included:** software and USB cable.

#### Specifications

**Accuracy:** ±3% of reading, with constant temperature and pressure

**Alarm:** audible beep and flashing red LED

**Output:** USB

**System requirements:** Windows® XP/Vista/7 or equivalent

**Power:** 5 VDC, powered from USB or optional battery pack

**Dimensions (L x dia):** 3 5/8" x 1" (9.1 x 2.5 cm)

**Instrument wt:** 1.9 oz (54 g)



Catalog number	Description	Range	Detector lamp	Price
<a href="#">TW-86262-30</a>	VOC-TRAQ USB PID toxic gas detector (benzene)	0.1 to 100 ppm	9.6 eV	
<a href="#">TW-86262-31</a>		1.0 to 1000 ppm		
<a href="#">TW-86262-32</a>		10 to 10,000 ppm		
<a href="#">TW-86262-33</a>	VOC-TRAQ USB PID toxic gas detector (isobutylene)	0.02 to 20 ppm	10.6 eV	
<a href="#">TW-86262-34</a>		0.2 to 200 ppm		
<a href="#">TW-86262-35</a>		2.0 to 2000 ppm		

[TW-86262-36](#) Rechargeable battery pack with AC adapter

[TW-86262-37](#) Pedestal device stand

[TW-86262-38](#) Carrying case accommodates sensor and accessories

[TW-86262-39](#) Calibration cap with tube

### Fixed-Mount Digital Gas Monitors

#### Prewired power supply with cord set for out-of-box operation

Start monitoring quickly and easily—prewired power cord and easy mounting provides out-of-box operation. Detect one or two gases in an area with these fixed-mount gas monitors. Rugged PVC enclosure makes these monitors suitable for a wide range of applications. Calibration Extending Firmware (CEF) enhanced sensors account for the aging of the CO, NO, and NO<sub>2</sub> sensors, decreasing the frequency of calibration. Front-panel LEDs and audible alarms indicate alarm condition. Two alarm relays control external devices such as fans, or connect to building management systems for notification.

**What's included:** prewired power cord.



81973-80

#### Specifications

Parameter	Range	Resolution
CO	0 to 500 ppm	1 ppm
O <sub>2</sub>	0 to 25% vol.	0.1% vol.
NO <sub>2</sub>	0 to 10 ppm	0.1 ppm
NO	0 to 100 ppm	1 ppm
SO <sub>2</sub>	0 to 20 ppm	1 ppm

**Repeatability:** ±10% of set point

**Alarm relays:** two SPDT relays rated for 5 amps at 250 VAC

**Alarms:** audible (80 dB) and LED indicators

**Display:** LED

**Operating conditions:** -5 to 120°F (-20 to 50°C)

**Power:** 110 to 220 VAC

**Dimensions (W x H x D):** 6 3/4" x 5 1/16" x 2 3/16"  
(173 x 135 x 66 mm)



Catalog number	Sensor type	Gases	Price
<a href="#">TW-81973-80</a>	Single	CO	
<a href="#">TW-81973-81</a>		O <sub>2</sub>	
<a href="#">TW-81973-82</a>		NO <sub>2</sub>	
<a href="#">TW-81973-83</a>		NO	
<a href="#">TW-81973-84</a>		SO <sub>2</sub>	
<a href="#">TW-81973-85</a>	Dual-Sensor	CO/O <sub>2</sub>	
<a href="#">TW-81973-89</a>		O <sub>2</sub> /NO <sub>2</sub>	
<a href="#">TW-81973-91</a>		O <sub>2</sub> /NO	
<a href="#">TW-81973-92</a>		O <sub>2</sub> /SO <sub>2</sub>	
<a href="#">TW-81973-93</a>		NO <sub>2</sub> /NO	
<a href="#">TW-81973-94</a>		NO <sub>2</sub> /SO <sub>2</sub>	
<a href="#">TW-81973-95</a>		NO/SO <sub>2</sub>	

## Fixed-Mount Analog Gas Detectors/Alarms

### Audio/visual alarms alert you to gas accumulation

An economical choice for fixed-mount gas detection, these units continuously monitor your open or enclosed areas for gas buildup. Wall mount the compact controller and the built-in sensor monitors the area; models with remote sensor include 50 feet of cable, extendable to 600 feet for remote placement of the sensor. Audio and visual indications alert workers in the immediate area if gas levels reach the alarm level. "Fail" LED notifies the user of a malfunction between the sensor and controller.

**Approval:** For models with remote sensor, the sensor housing meets NEC requirements for Class I, Division I, Group A, B, C, and D.

### Specifications

#### Controller

**Repeatability:** ±2%

**Temperature range:** -10 to 150°F (-20 to 65°C)

**Display:** analog

**Power:** 115 VAC, 220 VAC, or 24 VDC; 7-ft (2-m) power cord with three-prong plug included

**Dimensions (W x H x D):** 5" x 8" x 4" (12.7 x 20.3 x 10.2 cm)

#### Sensor

**Temperature range:** 5 to 140°F (-15 to 60°C)

**Warmup time:** 2 minutes

**Cable:** 50 ft (15 m) with connector for controller



10109-96

Sensor	Range	Accuracy	Sensor life	Gas detectors with built-in sensor		Gas detectors with remote sensor	
				Catalog number	Price	Catalog number	Price
H <sub>2</sub> S	0 to 50 ppm	±5%	>2 years	<a href="#">TW-10109-83</a>		<a href="#">TW-10109-84</a>	
SO <sub>2</sub>	0 to 1000 ppm	±10%	>1 year	<a href="#">TW-10109-92</a>		<a href="#">TW-10109-93</a>	
CO	0 to 250 ppm	±5%	>1 year	<a href="#">TW-10109-94</a>		<a href="#">TW-10110-17</a>	
Ammonia	0 to 1000 ppm	±5%	>2 years	<a href="#">TW-10109-95</a>		<a href="#">TW-10110-18</a>	
Ethylene oxide	0 to 10 ppm	±5%	>2 years	<a href="#">TW-10109-85</a>		<a href="#">TW-10109-86</a>	
Hydrogen	0 to 50% LEL	±5%	>1 year	<a href="#">TW-10109-97</a>		<a href="#">TW-10110-20</a>	
Hydrocarbons (nonmethane)	0 to 1000 ppm	±10%	>3 years	<a href="#">TW-10109-96</a>		<a href="#">TW-10110-19</a>	
Combustible (methane)	0 to 100% LEL	±10%	>1 year	<a href="#">TW-10110-16</a>		<a href="#">TW-10110-22</a>	
Combustible (methane)	0 to 1000 ppm	±10%	>1 year	<a href="#">TW-10110-15</a>		<a href="#">TW-10110-21</a>	
Freon®	0 to 1000 ppm	±10%	>1 year	<a href="#">TW-10110-24</a>		<a href="#">TW-10110-23</a>	

## Fixed-Mount Digital Gas Detectors

### Two-stage alarm features audio/visual indication and relay controls

Continuously monitor your open or enclosed areas for gas buildup. Wall mount the compact controller and the built-in sensor monitors the area; models with remote sensor include 50 feet of cable, extendable to 600 feet for remote placement of the sensor. Two-stage adjustable alarm allows you to set the low alarm as a caution and the high alarm as a danger output. Audible and visual indications alert workers in the immediate area. Large, red LCD makes visual monitoring easy. "Fail" LED and separate relay output notify you of a malfunction between the controller and sensor.

**Approval:** For models with remote sensor, the sensor housing meets NEC requirements for Class I, Division I, Group A, B, C, and D.

### Specifications

#### Controller

**Repeatability:** ±2%

**Temperature range:** 5 to 130°F (-15 to 55°C)

**Display:** red LCD

**Relay outputs (fail, low alarm, high alarm):** SPDT rated for 2 amps at 115 VAC or 2 amps at 24 VDC

**Power:** 115 VAC, 220 VAC, or 24 VDC; 7-ft (2-m) power cord with three-prong plug included

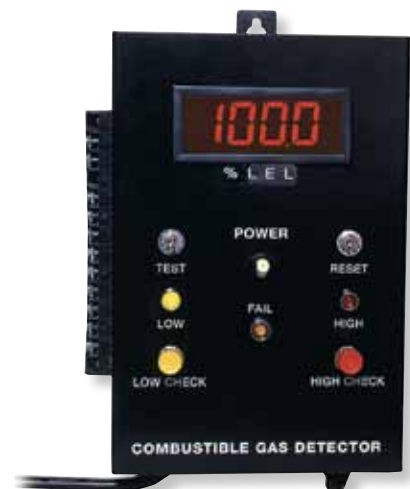
**Dimensions (W x H x D):** 6" x 8" x 4" (15.3 x 20.3 x 10.2 cm)

#### Sensor

**Temperature range:** 5 to 140°F (-15 to 60°C)

**Warmup time:** 2 minutes

**Cable:** 50 ft (15 m) with connector for controller



10109-78

Sensor	Range	Accuracy	Sensor life	Gas detectors with built-in sensor		Gas detectors with remote sensor	
				Catalog number	Price	Catalog number	Price
H <sub>2</sub> S	0 to 50 ppm	±5%	>2 years	<a href="#">TW-86385-01</a>		<a href="#">TW-86385-02</a>	
SO <sub>2</sub>	0 to 1000 ppm	±10%	>2 years	<a href="#">TW-10109-66</a>		<a href="#">TW-10109-67</a>	
CO	0 to 250 ppm	±5%	>1 year	<a href="#">TW-10109-68</a>		<a href="#">TW-10109-69</a>	
Ammonia	0 to 1000 ppm	±5%	>2 years	<a href="#">TW-10109-70</a>		<a href="#">TW-10109-71</a>	
Ethylene oxide	0 to 10 ppm	±5%	>2 years	<a href="#">TW-10109-74</a>		<a href="#">TW-10109-75</a>	
Hydrogen	0 to 50% LEL	±5%	>1 year	<a href="#">TW-10109-76</a>		<a href="#">TW-10109-77</a>	
Hydrocarbons (nonmethane)	0 to 1000 ppm	±10%	>3 years	<a href="#">TW-10109-72</a>		<a href="#">TW-10109-73</a>	
Combustible (methane)	0 to 100% LEL; 0 to 20,000 ppm	±10%	>1 year	<a href="#">TW-10109-78</a>		<a href="#">TW-10109-79</a>	
Freon®	0 to 1000 ppm	±10%	>1 year	<a href="#">TW-10109-80</a>		<a href="#">TW-10109-81</a>	



86437-00

### Datalogging Carbon Dioxide Meters

#### Silicone-based infrared sensor ensures superior stability over time and temperature

- Intuitive, menu-driven display with shortcut buttons for easy operation
- Quickly store and datalog up to 2700 readings

Low-maintenance, high-accuracy CO<sub>2</sub> sensor only requires calibration every two years. Backlit display shows reading both numerically and graphically—store data in memory or download to PC via RS-232. Includes a second probe port—order optional temperature/humidity probe to expand measurement capabilities (sold separately below).

Ideal for applications including: laboratory fume hood checks, industrial hygiene studies, spot measurement of food and beverage storage/lines, and HVAC monitoring.

**Approvals:** Meter: IP54; Probe: IP65 (NEMA 4), CE

**Compliance:** EN 61326-1:1997 for electromagnetic compatibility

**What's included:** CO<sub>2</sub> probe, rechargeable battery with 115 VAC adapter, software, and RS-232 cable.

#### Specifications

**Alarm:** adjustable audible/visible  
**Display:** backlit LCD with graphic display  
**Operating temperature:** -40 to 140°F (-40 to 60°C)  
**System requirements:** Windows® 95 or above  
**Output:** RS-232, 0 to 1 VDC

**Data storage:** 2700 points  
**Power:** rechargeable NiMH battery with 115 VAC adapter  
**Dimensions (W x H x D):** 3½" x 7⅞" x 1⅞" (7.9 x 20.0 x 4.1 cm)  
**Instrument wt:** 2 lb (0.9 kg)



Catalog number	Range	Resolution	Accuracy	Price
<a href="#">TW-86437-00</a>	0 to 2000 ppm	1 ppm	±20 ppm CO <sub>2</sub> + 2% of reading	
<a href="#">TW-86437-02</a>	0 to 20%	0.01%	±0.02% CO <sub>2</sub> + 2% of reading	

[TW-37301-90](#) Optional temperature/humidity probe

### IAQ-Calc™ Meters

#### Easy-to-use keypad scrolls through all readings at the touch of a button

- Low-drift NDIR CO<sub>2</sub> sensor gives stable, accurate readings
- Check building IAQ conditions to optimize productivity
- Ideal for testing HVAC system performance

The **IAQ-Calc CO<sub>2</sub> Meter** provides cost-effective CO<sub>2</sub> measurements. The sampling function records multiple point measurements.

The **IAQ-Calc Advanced IAQ Meter** calculates % outside air from either CO<sub>2</sub> or temperature readings and directly calculates dew point, wet bulb temperature, absolute humidity, and humidity ratio. The dual-line display simultaneously displays multiple parameters. Data logger logs up to 26,900 samples with time/date stamp. The included LogDat2™ software permits easy transfer of data to your computer and the LogDat2 Companion for Excel® automatically graphs all your data.

**What's included:** carrying case, batteries, and calibration report supplied by the manufacturer. Model 86384-15 also includes probe and AC adapter.

#### Specifications

**Display:** multiparameter LCD  
**Operating temperature:** 41 to 158°F (5 to 70°C)  
**System requirements:** Windows® XP, Vista, and 7

**Power:** four AA batteries (included) or 115 VAC adapter (included with 86384-15)  
**Dimensions (W x H x D):** 4" x 6⅛" x 1½" (10.2 x 17.0 x 3.8 cm)  
**Instrument wt**  
 Model 86384-05: 12 oz (0.4 kg)  
 Model 86384-15: 17 oz (0.5 kg)



86384-15

Parameter	Range	Resolution	Accuracy
CO <sub>2</sub>	0 to 5000 ppm	1 ppm	±3% of reading or ±50 ppm, whichever is greater
CO†	0 to 500 ppm	0.1 ppm	±3% of reading or ±3 ppm, whichever is greater
RH†	5 to 95%	0.1%	±2%
Temperature†	32 to 140°F (0 to 60°C)	0.1°F (0.1°C)	±1.0°F (±0.6°C)
% outside air†	0 to 100%	0.1%	—

†Applies to the advanced IAQ meter only.

Catalog number	Description	Price
<a href="#">TW-86384-05</a>	IAQ-Calc CO <sub>2</sub> meter (measures CO <sub>2</sub> only)	
<a href="#">TW-86384-15</a>	IAQ-Calc advanced IAQ meter	

[TW-93831-70](#) Optional RTD probe for secondary temperature

[TW-86384-51](#) Calibration kit for 86384-15

[TW-09376-01](#) Replacement batteries, AA. Pack of 4



## Indoor Air Quality Monitors

### Large, multiline LCD shows all installed sensor readings simultaneously

- Internal draw pump facilitates sampling
- Incubator models include a remote sampling probe for monitoring levels within incubator chambers

These handheld monitors measure temperature, humidity, and up to five additional plug-and-play smart sensors—ideal for indoor environmental quality measurements. Display all installed sensors simultaneously on the large, backlit display. Operate as a handheld unit, stand upright on a flat surface, fasten to a wall, or screw a tripod onto the bottom thread.

Program alarm set points for any installed sensor; an audible alarm alerts you when the set point has been reached. Data logging versions store readings on an SD card for later download. Incubator models include a temperature/RH probe and a separate gas sampling probe.

**What's included:** calibration adapter, three NiMH rechargeable batteries, and AC adapter/charger. Data logging models also include an SD card, USB cable, software, and SD card reader. Incubator models also include remote sample probes.



81973-47

### Specifications



<b>CO range:</b> 0 to 50 ppm	<b>Output:</b> USB
<b>NO<sub>2</sub> range:</b> 0 to 5.0 ppm	<b>Power:</b> three rechargeable NiMH batteries or AC adapter
<b>O<sub>2</sub> range:</b> 0 to 25%	<b>Battery life:</b> 12 to 14 hours depending on sensor combination
<b>Temperature range:</b> -23 to 131°F (-5 to 55°C)	<b>Dimensions (W x H x D):</b> 3 <sup>3</sup> / <sub>8</sub> " x 7 <sup>3</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>16</sub> " (9.8 x 19.7 x 7.8 cm)
<b>Humidity range:</b> 0 to 99.9%, noncondensing	<b>Instrument wt:</b> 20 oz (567 g)
<b>Alarm:</b> 80 dB audible	
<b>Display:</b> backlit multiline LCD	

Catalog number	Description	CO <sub>2</sub> range	CO <sub>2</sub> resolution	Price
<b>Standard models</b>				
<a href="#">TW-81973-41</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , temperature, RH	0 to 5000 ppm	1 ppm	
<a href="#">TW-81973-45</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , CO, temperature, RH			
<a href="#">TW-81973-47</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , CO, NO <sub>2</sub> , temperature, RH			
<b>Data logging models</b>				
<a href="#">TW-81973-42</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , temperature, RH	0 to 5000 ppm	1 ppm	
<a href="#">TW-81973-46</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , CO, temperature, RH			
<a href="#">TW-81973-48</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , CO, NO <sub>2</sub> , temperature, RH			
<b>Incubator models with remote probes</b>				
<a href="#">TW-81973-56</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , temperature, RH	0 to 20% vol	0.01%	
<a href="#">TW-81973-57</a>	IEQ Chek IAQ monitor, CO <sub>2</sub> , O <sub>2</sub> temperature, RH			

## Desktop Indoor Air Quality CO<sub>2</sub> Monitor

### Audible alarm sounds when CO<sub>2</sub> level exceeds set point

Monitor air quality in schools, office buildings, greenhouses, factories, and anywhere that carbon dioxide is a concern. Measures and displays carbon dioxide concentration, air temperature and humidity. Captures min/max; press RESET to clear memory. Also displays the year, month, date, and time of day. Audible alarm sounds when carbon dioxide levels exceed the set point. Activates an alarm relay that can be used for connection to an external indicating or controlling device. Model 81973-71 also data logs up to 5333 points for each parameter.

**What's included:** AC adapter. Model 81973-71 also includes software and a USB cable.



81973-40

### Specifications



Parameter	Range	Resolution	Accuracy
CO <sub>2</sub>	0 to 9999 ppm	1 ppm	±(5% of reading + 50 ppm)
Temperature	14 to 140°F (-10 to 60°C)	0.1°F/°C	±0.9°F (±0.6°C)
RH	0.1 to 99.9%	0.1%	±3% (10 to 90%), ±5% (<10% or >90%)

<b>Display:</b> LCD	<b>Power:</b> 5 VDC using 120 VAC power adapter
<b>Data storage (model 81973-71 only):</b> 5333 points for each parameter	<b>Dimensions (L x dia):</b> 4 <sup>5</sup> / <sub>8</sub> " x 4" (11.7 x 10.2 cm)
<b>Output:</b> USB	<b>Instrument wt:</b> 7.2 oz (204 g)
<b>Operating conditions:</b> 14 to 140°F (-10 to 60°C), <90% RH noncondensing	

Catalog number	Description	Price
<a href="#">TW-81973-40</a>	Desktop IAQ Monitor	
<a href="#">TW-81973-71</a>	Desktop IAQ Monitor with data logger	



81973-90

### Portable Indoor Air Quality CO<sub>2</sub> Meter

#### Built-in RS-232 interface for capturing readings on your PC

Check air quality in schools, office buildings, greenhouses, hospitals, and anywhere

that high levels of carbon dioxide are generated. Features a maintenance-free NDIR (nondispersive infrared) CO<sub>2</sub> sensor, user-programmable audible alarm, backlit LCD, and RS-232 interface. Meter calculates statistical weighted averages of TWA (8 hour time-weighted average) and STEL (15 minutes short term exposure limit).

**What's included:** software and cable, four AA batteries, and carrying case.

#### Specifications



Parameter	Range	Resolution	Accuracy
CO <sub>2</sub>	0 to 9999 ppm	1 ppm	±(5% of reading + 50 ppm)
Temperature	14 to 140°F (-10 to 60°C)	0.1°F/°C	±0.9°F (±0.6°C)
RH	0.0 to 99.9%	0.1%	±3% (10 to 90%), ±5% (<10% or >90%)

**Alarm:** audible

**Display:** backlit LCD

**Output:** RS-232

**Operating conditions:** 32 to 122° (0 to 50°C), <90% RH noncondensing

**Power:** four AA batteries or AC adapter

**Battery life:** approximately 24 hours

**Dimensions (W x H x D):** 7 7/8" x 2 3/4" x 2 1/4" (20.0 x 7.0 x 5.7 cm)

**Instrument wt:** 6.7 oz (190 g)

Catalog number	Description	Price
<a href="#">TW-81973-90</a>	Portable IAQ Monitor	



01117-02

### UV Ozone Analyzer

#### Accurate enough for lab use, yet rugged enough for use in industrial conditions

- Autoranging
- LED indicators for on/off status, recalibration, and filter change
- Pre-calibrated
- Multiple outputs for downloading to PC

This instrument is a UV absorption analyzer designed specifically for ozone measurements. It uses a mercury lamp filtered for absorption at 254 nm as is typical of other commercial instruments. The design is very compact and uses the latest digital microprocessor technology. The unit automatically covers three ranges: 0 to 1, 0 to 10 and 0 to 900 ppm. Data output is via serial port, USB, 0 to 2.5 VDC, or 4 to 20 mA. Analyzer features digital LCD and a time-and-date stamp digital data stream for external readout and data logging. Internal data logger stores and transfers approximately four days of data. Panel LEDs indicate "on," recalibrate, change input filter, and the ozone concentration at the sampling point exceeds 0.1 ppm.

Optional data logger 01117-04 can download into a PC or laptop via RS-232 serial cable. Send data continuously to the PC for continuous display and analysis. Automatically record time and max gas concentration scaling (X and Y axis scaling). Stores over 8000 readings. Graph statistics appear on screen as max, min, average, date and time.

Zoom capability provides more detailed viewing of any part of the graph. Graphs can be labeled and pasted into other applications.

#### Specifications

**Display:** backlit LCD

**Accuracy:** ±2%

**Sampling time:** 10 seconds

**Output:** digital display, USB, 0 to 2.5 V, 4 to 20 mA

**Power:** 120 VAC

**Dimensions (W x H x D):** 8 1/4" x 3 3/4" x 8 1/2" (21.0 x 9.5 x 21.6 cm)

Catalog number	Description	Price
<a href="#">TW-01117-02</a>	UV Ozone sensor	

[TW-01117-04](#) Data logger; requires one 9 V battery (not included)

[TW-09376-04](#) Batteries, 9 V. Pack of 4

## Multigas Leak Detector

### Check for minute leaks in gas chromatography systems

This leak detector detects leaks of any gas with a thermal conductivity different from air. Leaks are indicated by LED indicators; when the last indicator lights, an audible alarm will sound. Zero the unit by simply pressing a button in a fresh air environment. Use the optional small probe adapter for hard-to-reach leaks.

#### Specifications

Gas	Minimum leak rate (cc/sec)
Helium	1.0 x 10 <sup>-5</sup>
Hydrogen	1.0 x 10 <sup>-5</sup>
Nitrogen	1.4 x 10 <sup>-3</sup>
Argon	1.0 x 10 <sup>-4</sup>
Carbon dioxide	1.0 x 10 <sup>-4</sup>

**Power:** rechargeable batteries (included)  
**Battery life:** 6 hours typical  
**Operating conditions:** 32 to 120°F (0 to 48°C),  
 0 to 97% RH



Catalog number	Description	Price
<a href="#">TW-81949-10</a>	Multigas leak detector	

[TW-81949-11](#) Soft carrying case

[TW-81949-12](#) Small probe adapter



81949-10

## Pocket Ozone Detector

### Accurate, easy-to-read digital display

- Versatile meter can be used for fixed or portable monitoring
- Ideal for leak checks in generators, valves and piping

The heated metal oxide semiconductor has a range of 0.02 to 10 ppm; digital readout is in 0.01 ppm increments. Use as a permanent detector indoors when the concentration average is below 0.1 ppm; use outdoors or at concentrations up to 10 ppm for short periods of time. Includes rechargeable batteries, charger, and carrying case.

Order optional calibrator to verify that your ozone detector is conforming to the original calibration. Calibrator recalibrates detector at 0.1 ppm. It measures 2¼"W x 3¾"H x 1"D and includes a 9 V battery.

#### Specifications

**Display:** LCD      **Power:** rechargeable batteries with a charger (included)      **Dimensions (W x H x D):** 2" x 4" x 1" (5.1 x 10.2 x 2.5 cm)



Catalog number	Description	Range	Price
<a href="#">TW-86316-30</a>	Ozone detector	0.02 to 10 ppm	

[TW-86316-61](#) Ozone calibrator (0.1 ppm)

[TW-09376-04](#) Replacement battery, 9 V. Pack of four



86316-30

## Fixed Ozone Detector with Alarm

### Fixed system alerts workers to hazardous ozone levels

- Easy-to-read, multicolor graphical display
- HMOS sensor for superior sensitivity

LED bar graph changes color as ozone levels increase: green indicates a safe level, yellow is caution level, and red is the danger level. Features a heated metal oxide semiconductor (HMOS) sensor for excellent sensitivity and quick response time. Also features an audio alarm and relay output that are triggered at 0.1 ppm (danger level) and a 0 to 3 VAC recorder output. Order optional calibrator to verify that your ozone detectors are conforming to their original calibration.

#### Specifications

**Display:** LED color bar graph      **Power:** AC adapter (included)  
**Output:** 0 to 3 VDC      **Dimensions (W x H x D):** 2¾" x 3¼" x 1¾" (6.0 x 8.3 x 3.5 cm)  
**Relay output:** rated for 1 amp at 30 volts AC or DC



Catalog number	Description	Range	Price
<a href="#">TW-86316-10</a>	Fixed ozone detector with alarm	0.02 to 0.14 ppm (0.2 to 0.30 or more ppm with an external data readout)	

[TW-86316-61](#) Ozone calibrator (0.1 ppm)



86316-10

### Headspace O<sub>2</sub>/CO<sub>2</sub> Analyzers

Measure the amount of oxygen in food packaging to ensure product quality and safety

- Save time and money by preventing spoilage

Use these analyzers to measure residual oxygen in gas-flushed CAP/MAP food packages. Analyzers resist nitrogen and carbon dioxide—commonly used as background gases in packaging. Calibrate the units by sampling room air—normal air reading is 20.9% oxygen. Durable sensor in the analyzer has excellent zero and span stability after calibration.



Handheld analyzer 10360-20

#### Handheld Oxygen Analyzer

This handheld analyzer is compact and lightweight so you can take it anywhere you need to measure residual oxygen levels in packages. Use a sampling probe assembly with a needle to pierce through the package. A built-in pump draws and delivers a sample to the sensor. Analyzer can also be used for applications where the oxygen level is very high (50 to 100%), without overloading the sensor. Other features include auto shut-off after 45 minutes of nonuse and low-battery indication.

**What's included:** one sampling probe assembly, two needles, two syringe filters, pack of 200 septas, four rechargeable NiCd batteries, and a charger with 115/240 VAC charger/adaptor.

#### Specifications

<b>Sensor type:</b> electrochemical cell	<b>Power:</b> four AA NiCd rechargeable batteries (included)
<b>Sampling pump:</b> internal with adjustable timer from 5 to 10 seconds	<b>Battery life:</b> 8 hours
<b>Sampling assembly:</b> probe with male luer connection for side-port needle, PTFE tubing	<b>Dimensions (W x H x D):</b> 4" x 8" x 1 3/4" (10.2 x 20.3 x 4.4 cm)

Catalog number	Range	Resolution	Accuracy	Price
<a href="#">TW-10360-20</a>	0.1 to 100% oxygen	0.1%	±1%	

#### Accessories for Both Analyzers

- [TW-10360-24](#) Replacement sampling probe assembly
- [TW-10360-26](#) Replacement needles, side-port hole. Pack of three
- [TW-10360-28](#) Replacement septa provide leak-tight seal upon needle penetration. Pack of 200



Benchtop analyzer 10360-30



Display 10360-70

#### Benchtop O<sub>2</sub> /CO<sub>2</sub> Analyzer

Use these benchtop analyzers for continuous package testing in the laboratory or at the packing line. Analyzers feature a heavy-duty, maintenance-free sensor that compensates for slight temperature variations. Unlike other sensors, accuracy is not affected by flow rate, heat, or hydrocarbon gases.

Model 10360-30 is used to sample food packs, insert the needle tip of the probe into the food pack through a foam seal pad. Seal pad provides a tight seal and prevents air from leaking into the package through the puncture hole. Press the pump button to draw a sample from the package. The built-in pump draws in the precise amount of sample required for analysis, then turns off after a pre-set sampling time.

Pharmaceutical oxygen headspace analyzer (model 10360-60) is ideal for measuring headspace oxygen in vials. Low-volume sensor design requires only a small volume of sample—perfect for use with vials from 1 to 250 mL.

Select model 10360-70 for oxygen and carbon dioxide testing. 10360-70 features a solid state infrared sensor for measuring CO<sub>2</sub> as well as electrochemical cell for O<sub>2</sub>.

**What's included:** sampling probe assembly, two needles, two syringe filters, pack of 200 septa, 12 VDC rechargeable gel battery, and a 115/240 VAC charger/adaptor.

#### Specifications

<b>Sensor type:</b> heavy-duty electrochemical O <sub>2</sub> cell; Infrared CO <sub>2</sub> sensor (model 10360-70 only)	<b>Sampling assembly:</b> probe/needle holder for luer needle with side hole; disposable filter, 1/16" OD inert tubing.
<b>Sampling pump:</b> miniature diaphragm type with adjustable timer from 1 to 10 seconds	<b>Power:</b> 115/240 VAC or rechargeable gel battery (included)
	<b>Battery life:</b> 8 hours
	<b>Dimensions (W x H x D):</b> 10" x 4" x 9 3/4" (25.4 x 10.2 x 24.8 cm)

Catalog number	Range	Resolution	Accuracy	Price
<a href="#">TW-10360-30</a>	0.1 to 100% O <sub>2</sub>	0.1% O <sub>2</sub>	±0.1%	
<a href="#">TW-10360-60</a>	0.01 to 100% O <sub>2</sub>	0.01% O <sub>2</sub>	±0.1%	
<a href="#">TW-10360-70</a>	0.1 to 100% O <sub>2</sub> , 0.1 to 100% CO <sub>2</sub>	0.1% O <sub>2</sub> , 0.1% CO <sub>2</sub>	±0.1%	

## CheckPoint O<sub>2</sub> and O<sub>2</sub>/CO<sub>2</sub> Analyzers

### Measure gas levels in modified atmosphere packages (MAP) in just 10 seconds

- Internal memory function stores up to 10 tests
- Battery powered for up to 2400 measurements

Compact, handheld CheckPoint analyzer packs excellent functionality in a portable, easy-to-use instrument. Simply use probe assembly to penetrate package to be sampled. Powerful, internal pump draws 15-mL sample and displays gas concentration level in seconds on bright, 3-digit LED display. Memory function allows you to store up to 10 readings to be recorded later. Auto-calibration feature ensures quick calibration at the touch of a button. Analyzer will power off automatically after one minute of inactivity to save battery life. Display hold option enables you to lock the display for easy readability.

Analyzers are encased in a rugged, anodized aluminum housing with IP53 rating for impact and splash resistance. Integrated needle holder prevents accidental sticks when probe is not in use. Select from single O<sub>2</sub> or combined O<sub>2</sub>/CO<sub>2</sub> model to suit your application.

**What's included:** sampling probe assembly, ten septa, ten replacement needles and filters, four AA batteries, and NIST-traceable calibration report supplied by the manufacturer.



86490-02

Needle and probe are conveniently stored inside meter case when not in use.

### Specifications



<b>Sensor type</b> O <sub>2</sub> : electrochemical CO <sub>2</sub> : infrared (86490-02 only)	<b>Sampling pump:</b> 200 mbar max vacuum pump <b>Sampling assembly:</b> probe with integral needle holder and sampling hose	<b>Power:</b> four AA batteries (included) <b>Dimensions (W x H x D):</b> 3" x 5 5/8" x 2 1/2" (7.6 x 14.4 x 6.4 cm)			
Catalog number	Description	Range	Resolution	Accuracy	Price
<a href="#">TW-86490-00</a>	CheckPoint O <sub>2</sub>	0 to 100% O <sub>2</sub>	0.1%	±0.1% (0 to 5%), ±2% (5 to 100%)	
<a href="#">TW-86490-02</a>	CheckPoint O <sub>2</sub> /CO <sub>2</sub>	0 to 100% O <sub>2</sub> 0 to 100% CO <sub>2</sub>	0.1%	O <sub>2</sub> : ±0.1% (0 to 5%), ±2% (5 to 100%); CO <sub>2</sub> : ±0.2% (0 to 10%), ±2% (10 to 100%)	

[TW-86490-14](#) Replacement septum, pack of 100

[TW-86490-15](#) Replacement septum, pack of 1000

## CheckMate® 3 O<sub>2</sub> and O<sub>2</sub>/CO<sub>2</sub> Analyzers

### Configure up to 1000 customized product testing programs

- Logging of more than 10,000 test results
- Download data via built-in USB, RS-232, or Ethernet
- LAN monitor capability
- Requires only a small sample volume—use for both food and pharmaceutical headspace measurements.

Benchtop CheckMate II analyzers are fast, reliable, and easy to use. Powerful units require only 3.15-mL O<sub>2</sub> or 5-mL CO<sub>2</sub> sample volume. Gas sampling starts automatically as syringe is introduced to the package for fail-safe operation. Sensor features water trap system to maintain sensor integrity. Gas levels display in 7 to 10 seconds on front panel touchscreen.

Use icon-based smart keys to customize sampling, alarms, and data recording parameters for up to 1000 different product types. Complete documentation of test results with time/date stamp can be sorted and printed immediately, or stored for download later to computer. Analyzers feature self-diagnostics to monitor operation and prevent common user errors. Select from single O<sub>2</sub> or combined O<sub>2</sub>/CO<sub>2</sub> model to suit your application.

**What's included:** sampling probe assembly, ten septa, ten replacement needles, five replacement sampling hoses, ten water trap filters, two rolls of replacement printer paper, USB stick for download, and NIST-traceable calibration report supplied by the manufacturer.



86490-26

### Specifications



<b>Sensor type</b> O <sub>2</sub> : ceramic solid state CO <sub>2</sub> : infrared	<b>Sampling pump:</b> built-in, automatic sample draw	<b>Sampling assembly:</b> probe with integral needle holder and sampling hose	<b>Dimensions (W x H x D):</b> 11 7/8" x 7" x 8 5/8" (30.2 x 17.8 x 21.9 cm)			
Catalog number	Description	Range	Resolution	Accuracy	Power (VAC, Hz)	Price
<a href="#">TW-86490-25</a>	CheckMate 3 O <sub>2</sub>	0 to 100%	0.10%	±1% of reading	100 to 240, 50/60	
<a href="#">TW-86490-26</a>	CheckMate 3 O <sub>2</sub> /CO <sub>2</sub>	O <sub>2</sub> : 0 to 100% CO <sub>2</sub> : 0 to 100%	O <sub>2</sub> : 0.1% CO <sub>2</sub> : 0.1%	O <sub>2</sub> : ±1% of reading; CO <sub>2</sub> : ±1.5% FSD	100 to 240, 50/60	

[TW-86490-14](#) Replacement septum. Pack of 100

[TW-86490-15](#) Replacement septum. Pack of 1000