



# Chip Measurement System

## Direct-reading Spot Measurement System

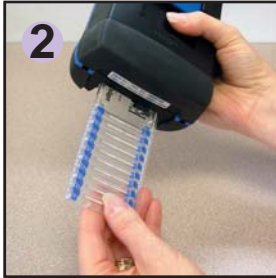
- ▶ **Fast Response — results in 20 seconds**
  - No warm-up required
  - TWA and action levels reported within 1 to 2 minutes
- ▶ **Highly accurate**
  - Accuracy  $\pm 4$  to 7% of measured value for most gases
  - Consistent flow maintained and corrected for changes in atmospheric pressure
  - Measure quantities as low as 0.20 ppm benzene
  - Not subject to human error and bias
- ▶ **Simple 1, 2, 3 operation**
  - Minimal training required
- ▶ **Concentration displayed on easy-to-read backlit digital readout in any one of four languages**
- ▶ **No calibration gas required**
  - Calibration information is stored on each CMS chip
- ▶ **System integrity assured**
  - Electronic system self-test performed upon start-up
  - Sampling system test performed before each test
- ▶ **No battery charging**
  - Operates on AA size alkaline batteries
  - Ready for instant use — ideal for emergency response
- ▶ **Internal data recorder**
  - Stores up to 50 measurements
  - Data includes time/date, containment/concentration, and sequential number of measurement series
  - User may enter measurement location
  - Recall and display data on demand

Dräger CMS combines substance-specific measuring chips with an electronic-based analyzer for an easy-to-use spot measurement system that responds quickly and accurately to your sampling needs.

### CMS Easy Operation



1 Turn on unit by moving the slide to position 1. Wait for "load chip" prompt.



2 Follow instructions on display to load chip. Move slide to position 2. Wait for "chip ok."



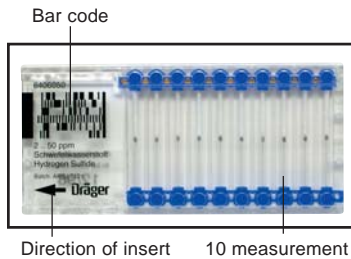
3 Move slide to position 3 to perform measurement.



#### The CMS Analyzer

The CMS Analyzer is comprised of:

1. A revolutionary optical system that analyzes color.
2. An integral mass flow controller and pump system that provide unparalleled reproducibility.



#### The CMS Chips

Each CMS Chip contains 10 capillaries (10 tests) filled with substance-specific reagent. A barcode on the chip is read by the analyzer optics to obtain information such as gas type, measuring range, and required measuring time. Gas type, part number, and batch number are printed on the chip for user convenience. Chip calibration remains valid for two years.



# Chip Measurement System

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### CMS Analyzer\*

Description	Cat. No.	Price
<b>CMS Analyzer Set with Data Recorder</b> includes analyzer, 4 AA alkaline batteries, and Allen wrench	<b>802-05200</b>	<b>\$1,729.00</b>
<b>Remote System</b> includes pump, 3-meter extension hose, float-probe, and screwdriver	<b>802-05060</b>	<b>569.00</b>
<b>Pump/Analyzer Remote System</b> , pump permanently attached to analyzer	<b>802-17700</b>	<b>2,365.00</b>
<b>Complete Emergency Response Kit</b> includes analyzer, remote system, telescopic probe, 10 chips (chlorine, ammonia, petroleum hydrocarbons, perchloroethylene, hydrogen sulfide, nitrous fumes†, carbon dioxide, carbon monoxide, hydrochloric acid, and sulfur dioxide)	<b>802-55711</b>	<b>3,585.00</b>
<b>Indoor Air Kit</b> includes analyzer and four chips (carbon dioxide, carbon monoxide, ozone, and formaldehyde)	<b>802-56455</b>	<b>2,035.00</b>
<b>Accessories</b>		
<b>Leather Carry Case &amp; shoulder strap</b>	<b>802-05080</b>	<b>105.00</b>
<b>Extension Hose</b> includes connector and float probe, to be used with analyzer/remote pump 802-17700 only		
<b>3 meter Hose</b>	<b>802-17614</b>	<b>107.00</b>
<b>10 meter Hose</b>	<b>802-17613</b>	<b>170.00</b>
<b>Probe Bar with 1-meter Extension Hose</b> , to be used with analyzer/remote pump 802-17700 only	<b>802-17963</b>	<b>173.00</b>

\* Now available with deep mine approval. Contact your SKC representative for more information.



Prices subject to change without notice

### CMS Chips

Chip	Measuring range (ppm)	Cat. No.	Price
Acetic acid	2 - 50	802-06330	\$ 82.50
Acetone	40 - 600	802-06470	82.50
Ammonia	0.20 - 5.0	802-06550	82.50
Ammonia	2 - 50	802-06130	57.50
Ammonia	10 - 150	802-06020	57.50
Ammonia	100 - 2,000	802-06570	63.00
Benzene‡	0.2 - 10	802-06030‡	162.50
Benzene‡	0.5 - 10	802-06160‡	162.50
Butadiene	1 - 25	802-06460	82.50
Carbon dioxide	200 - 3,000	802-06190	57.50
Carbon dioxide	1,000 - 25,000	802-06070	55.50
Carbon dioxide	1 - 20 Vol %	802-06210	57.50
Carbon monoxide	5 - 150	802-06080	55.50
Chlorine	0.2 - 10	802-06010	57.50
Ethanol	100 - 2,500	802-06370	82.50
Ethylene oxide	0.4 - 5.0	802-06580	149.50
Formaldehyde	0.2 - 5.0	802-06540	82.50
Hydrochloric acid	1 - 25	802-06090	74.00
Hydrochloric acid	20 - 500	802-06140	74.00
Hydrogen cyanide	2 - 50	802-06100	69.00
Hydrogen peroxide	0.2 - 2.0	802-06440	86.50
Hydrogen sulfide	0.20 - 5.0	802-06520	82.50
Hydrogen sulfide	2 - 50	802-06050	57.50
Hydrogen sulfide	20 - 500	802-06150	57.50
Hydrogen sulfide	100 - 2,500	802-06220	57.50
Isopropanol	40 - 1,000	802-06390	99.00
Mercaptan	0.25 - 6.0	802-06360	99.00
Methanol	20 - 500	802-06380	99.00
Methyl tert Butyl Ether (MTBE)	10 - 200	802-06530	82.50
Methylene chloride	20 - 400	802-06510	82.50
Nitrogen dioxide	0.5 - 25	802-06120	57.50
Nitrous fumes†	0.5 - 15	802-06060†	55.50
Nitrous fumes†	10 - 200	802-06240†	57.50
Oxygen	1 - 25 Vol %	802-06490	102.00
Ozone	25 - 1,000 (ppb)	802-06430	82.50
Perchloroethylene	5 - 150	802-06040	69.00
Petr. hydrocarbons	20 - 500	802-06200	86.50
Petr. hydrocarbons	100 - 3,000	802-06270	82.50
Phosgene	0.05 - 2.0	802-06340	99.00
Phosphine	0.1 - 2.5	802-06400	73.00
Phosphine	1 - 25	802-06410	73.00
Phosphine	20 - 500	802-06420	73.00
Phosphine	200 - 5,000	802-06500	74.00
Propane	100 - 2,000	802-06310	82.50
Styrene	2.0 - 40	802-06560	82.50
Sulfur dioxide	0.4 - 10	802-06110	57.50
Sulfur dioxide	5 - 150	802-06180	69.00
Toluene‡	10 - 300	802-06250‡	73.00
Training Chip	—	802-06290	22.50
Trichloroethylene	5 - 100	802-06320	69.00
Vinyl chloride	0.3 - 10	802-06170	73.00
Vinyl chloride	10 - 250	802-06230	73.00
Water Vapor	0.4 - 10.0 mg/L	802-06450	84.50
Xylene‡	10 - 300	802-06260‡	69.00

‡ Requires refrigerated storage below 50 F (10 C)

† Detects nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) only; not suitable for nitrous oxide.

### Convenient CMS Kits

CMS is available separately or in two application-specific kits.

### Indoor Air Quality Kit

This kit combines the CMS analyzer with chips for the most commonly measured gases and vapors in indoor air investigations (carbon monoxide, carbon dioxide, formaldehyde, and ozone). It is an excellent tool for checking chemical contaminants for this application. See ordering at left.

### Emergency Response Kit

With the alkaline battery-powered CMS analyzer, remote system, telescopic probe, and chips for 10 different contaminants contained in this kit, you should be ready for most emergency response situations. See ordering at left.



# For all your air sampling needs.