

MSA Detector Tubes and Sampling Pumps

Product Specification

Monitor air contaminants without extractions, analyses, or complicated calculations.

MSA/AUER detector tubes are a reliable method of testing for more than 120 hazardous gases and vapors. Detector tubes are flame sealed glass tubes containing treated adsorbent granules that react with a specific compound or group of compounds, causing the adsorbent to change color. A sample is collected by attaching the detector tube to a special bellows-type pump that draws a known volume of air with each stroke. After sampling, the length of adsorbent bed that has undergone the color change is measured from a scale printed on the tube, allowing direct reading of the vapor concentration – no extraction, no analysis, and no calculations are required.

Because they are simple to use, detector tubes have been used in a broad range of applications. They are particularly useful when quick screening is required, such as in Haz-Mat Response, and in industrial situations in which specific groups of compounds are monitored regularly.

These tubes and pumps are interchangeable with Draeger tubes and pumps.¹



E000055

MSA/AUER Kwik-Ref CD-ROM



P000659

Offers technical data on all MSA detector tubes, plus a complete list of threshold limit values (TLVs)

Table 1. MSA Detector Tubes

Substance Measured	Detector Tube	Measuring Range (ppm)	Threshold Limit Value 1998 (ppm)	Catalog No.
Ammonia	NH ₃ -2	2-500	25	28161-U
Bromobenzene	Aromatic HC	5-500	0.5	28162-U
Benzene	C ₆ H ₆ -1	0.5-25	0.5	28163-U
Chlorine	Cl ₂ -0.2	0.2-30	0.5	28164-U
Carbon monoxide	CO-5	5-1000	25	28166-U
Carbon monoxide	CO-10	10-3000	25	28167-U
Carbon dioxide	CO ₂ -0.1%	0.1-7.0 vol %	5000	28168-U
Carbon dioxide	CO ₂ -100	100-3000	5000	28169-U
Formaldehyde	Formaldehyde-0.1	0.1-55	0.3 ceiling	28171-U
Hydrogen sulfide	H ₂ S-1	1-200	10	28172-U
Hydrogen sulfide	H ₂ S-100	100-4000	10	28173-U
Hydrogen chloride	HCl-1	1-30	5 ceiling	28174-U
Hexane	Hexane-20	20-3200	50	28175-U
Nitrous fumes	Nitr.-0.5	0.5-50	—	28176-U
Nitrous fumes	Nitr.-50	50-3000	—	28177-U
Nitrogen dioxide	NO ₂ -0.5	0.5-50	—	28178-U
Ozone	Ozone-0.05	0.05-5	0.05	28179-U
Phosphine	PH ₃ -0.05	0.05-3	0.3	28181-U
Sulfur dioxide	SO ₂ -1	0.5-25	2	28182-U
1,1,2-Trichloroethane	Trichloroethane-5	10-170	10	28183-U
Triethylamine	Triethylamine-5	5-30	1	28184-U

Other detector tubes are available on request.

Kwik-Draw Deluxe Detector Tube Pump



P000660

To obtain a precise 100mL sample, simply grasp the hand grip and push the knob. The compression system provides the guiding action for driving a spring-loaded bellows pump. An integral, easy-to-read stroke counter shows the number of strokes performed and provides a positive stop when the stroke is fully compressed. The unique end-of-stroke indicator blinks after the precise volume of air is drawn, confirming that sufficient air has been sampled for a successful reading.

Gas-Tester II H Detector Tube Pump



E000057

Set the Gas-Tester II H pump for sampling by compressing the bellows. Start the pump stroke by pressing the release button. When the 100mL sample is drawn through the tube, the end-of-stroke indicator changes color. Measurements are always accurate because the sample draw procedure is controlled only by the specifications of the pump and the flow resistance of the detector tube. The pump also has a stroke counter.

¹If a pump meets the following criteria, it may be used with any detector tube designed for use with that kind of pump. Pumps meeting these criteria are interchangeable. 1) The characteristics of the pump - volume per stroke, sampling time and flow - must be within the same accuracy range. 2) The detector tubes must have an outer diameter of 7mm and be factory-calibrated with a pump that meets the criteria of 1). 3) The manufacturer of tubes and pumps must operate under a certified quality assurance program. Based on these criteria, the following pumps are interchangeable: MSA Kwik-Draw, AUER Gas-Tester II H, Draeger Model 31, Draeger accuro[®].

²Protection class: IP54; Ex Protection: EEx ia IIC T4, EEx ia I intrinsic safety approval. Other approvals pending.

³CE approved.

Trademark

accuro – Draeger

Contact our Technical Service Department (phone 800-359-3041 or 814-359-3041, FAX 800-359-3044 or 814-359-5468) for expert answers to your questions.

Toximeter II Automatic Detector Tube Pump

You can use this light-weight, intrinsically safe² pump with detector tubes, but it also is perfect for many other measuring tasks, employing sample collection tubes, smoke-generating tubes, impingers, or gas collection bags, and is certified for use in potentially explosive atmospheres.

This continuously operating, electronically controlled membrane pump is controlled through main and sub menus activated by two push buttons, and is indicated on an LCD – the alpha-numeric display indicates main menu or sub menu and current operating condition. Preset the number of 100mL pump strokes. The electronic stroke volume (100±5mL) is regulated by a temperature compensated differential pressure sensor. For adsorbent tubes, sampling is at a constant flow rate of 300cc/min. The pump also provides fault recognition for low battery or blocked flow conditions. Menus in Danish, Dutch, English, French, German, Italian, Spanish, and Swedish simplify user interface and operation. A rechargeable nickel/cadmium battery pack is included.



E000056

Toximeter II Pump Specifications:

Dimensions: 194mm high x 72mm wide x 33mm deep

Weight: 580g

Operating Temperature: -10°C to 50°C

Operating Pressure: maximum ±200mbar from ambient

Power: rechargeable NiCd battery pack
~8 hours operation;
~300 charging cycles

Ordering Information

Description	Cat. No.
MSA Detector Tubes	
See Table 1	
MSA/AUER Kwik-Ref CD-ROM	28187-U
Kwik-Draw Deluxe Pump	28185-U
Gas-Tester II H Pump	28186-U
Toximeter II Pump ³ with battery pack	28188-U
Charger, 110VAC ³	28157-U
Charger, 240VAC ³	28158-U

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