

EXPANDING YOUR VISION



**ZISTOS**<sup>®</sup>  
PORTABLE VIDEO SYSTEMS

**INTEGRATED ALARM CONSOLE**



**Ladder - Top View**

**NEW**

PATENT PENDING

# **SafeAir**LADDER<sup>TM</sup>

Designed to perform a secondary test as well as monitor and report environmental conditions inside of a confined space prior to an individual making entry.

The **SafeAir**LADDER integrates gas metering electronics and alarm annunciation onto a ladder that is used to facilitate entry into a confined space. The gas metering sensor is mounted to the base of the ladder and is designed to be inserted into the confined space — such as a tanker truck, rail tanker, processing tank, etc. The top of the ladder mounts onto the manway and has an integrated alarm console, which remains outside of the confined space. The console offers a visual and audible indication of atmospheric conditions as communicated from the metering sensor at the base of the ladder. When activated and inserted into a confined space the ladder can alert a worker prior to entry, (and management), that the atmosphere inside of the tank

PATENT PENDING

# SafeAirLADDER™

is not suitable to sustain human life. Conditions are indicated via a yellow light (indeterminate state or malfunction), green light (environment safe) or a red light (hazardous environment) in conjunction with a loud 120 decibel audible alarm. These visual and audible indicators provide local alarms for the worker and will alert him to a hazardous condition — even if he neglects to perform a mandated atmospheric safety check. In addition, status conditions can be monitored remotely

via WiFi on a smartphone, tablet or computer, allowing management to view the status of all ladders inserted into confined spaces on one screen.

The system is not intended to replace existing confined space entry safety protocols. It is intended to provide additional monitoring, that not only provides a back-up for standard confined space entry procedures, but it can also alert management when established safety procedures are not being followed.



### Integrated Alarm Console

This indicates the status of the atmosphere in the confined space with lights and an audible alarm. It can also communicate this information to a mobile device, tablet or PC via WiFi.

### Gas Meter Monitor

CO, H<sub>2</sub>SO<sub>4</sub>, O<sub>2</sub>, LEL  
High temperature alarm

### Remote Monitoring Application

The real-time status of four different ladders is displayed on a mobile device, (via WiFi). Application supports status for up to 24 ladders simultaneously.



### Benefits

- Various ladder sizes available
- Ladder with built-in gas meter and alarm forces an atmospheric test prior to entry
- Alerts management that an individual didn't meter the confined space/attention is warranted
- Remotely monitor confined space via WiFi on a phone, tablet, PC when a ladder is inserted into a tank
- Used in conjunction with the standard OSHA metering safety protocol, this system provides a secondary fail-safe to keep workers from entering a toxic atmosphere

### Alarm Module Features

- Alerts on low battery conditions
- Key is needed to clear alarm
- Bright red, yellow and green lights indicate local conditions at the top of the ladder
- Sensor indicates when ladder is in position to enter the confined space
- Loud local audible alarm will alert the individual and those in proximity that an atmosphere is not suitable to sustain life – PRIOR to entry

PATENT PENDING