

SPECIFICATIONS

Model	Range
8530CA30A1100	0-30% Carbon Dioxide in Argon
8530OA10A1100	0-10% Oxygen in Argon

Other models and ranges available on request, consult Thermco.

Flow Rate: 0-750 SCFH (0-20.1 Nm³/h)

Gas Mixing Accuracy: This is the accuracy statement for the Model 8530CA30A1100. For other models consult Thermco.

Mixture Accuracy	
Component gas nominal concentration %	Accuracy over the flow rate of 0-750 SCFH
> 5	±5% of the nominal
1 to 5	±0.4% absolute
< 1	Consult Thermco

The stated accuracies are valid over the ambient and gas supply temperatures of 50°F to 104°F (10°C to 40°C) and assuming the supply gas temperatures are equal.

Example of accuracy at 20% carbon dioxide, 80% argon: ±5% of 20% is equal to ±1.0% carbon dioxide; the accuracy will be 19.0% to 21.0% carbon dioxide.

Example of accuracy at 2% carbon dioxide, 98% argon: ±0.4% carbon dioxide, the accuracy is 1.6% to 2.4% carbon dioxide.

Gas analyzer accuracy is separate, consult Thermco for details.

Ambient and Supply Gas Operating Temperatures: 10°F to 104°F (-23°C to 40°C)

Supply Gas Pressure: 100 - 125 PSIG (6.9 - 8.6 barg)

Mixed Gas Outlet Pressure: 10 - 50 PSIG (0.7 - 3.4 barg)
Regulator provided by Thermco in mixer for mixed gas pressure adjustment.

Gas Connections and Piping: 1/2 inch female NPT pipe for major, minor and mixed gas connections.

Surge Tank Pressure Switch: Solid-state sensing and output, rated 100,000,000 cycles.

Power Requirements: 115 VAC, 50/60 Hz, 1.2 amp. Acceptable voltage range 104-126 VAC. Available on request, 220 VAC, 50/60 Hz, 0.6 amp. Acceptable voltage range 204-240 VAC.

Weight: Net 105 lbs. (47.6 kg); Packed 165 lbs. (74.8 kg).

Dimensions: 27" (69 cm) height, 25.5" (65 cm) width, 15.5" (40 cm) depth.

Enclosure: Carbon steel NEMA 4, powder-coated paint, quick release latch, lockable staple.

Mounting: Wall mount indoors or outdoors.

Surge Tank: 5 gallon carbon steel, ASME coded and CRN registered.

WARNING

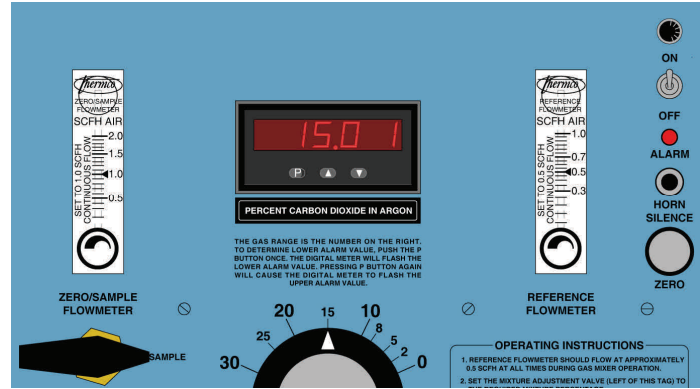
Improper use of this product can cause death, serious injury or property damage. Personnel dealing with this equipment should read and understand warning labels and instruction manuals provided by Thermco. Only personnel familiar with industrial gases should attempt to install or service this equipment. Gases from high pressure cylinders must be reduced to the specified pressure before entering the gas mixing system to prevent the possibility of equipment damage and personal injury.

Only use oxygen in gas mixers specifically designed for oxygen service. Gas mixers not designed for oxygen service cannot be converted to oxygen service.

Flammable, toxic or corrosive gases should not enter these gas mixing systems.

THERMCO GAS ANALYZER

The gas analyzer built-in to the mixing system allows the operator to adjust the mixer to the required proportion. The gas analyzer is constantly monitoring the gas mixture.

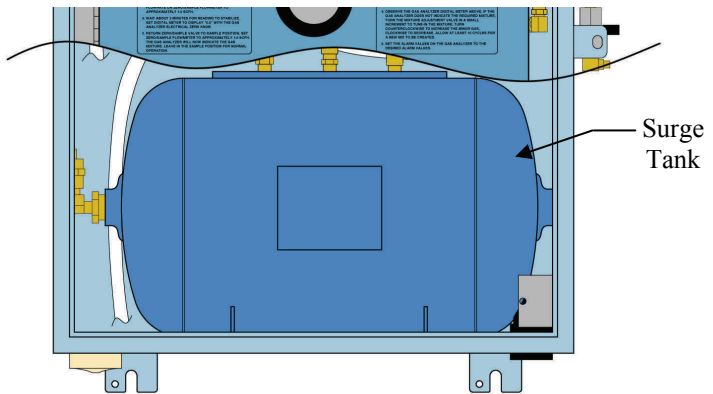


The gas analyzer is equipped with high and low alarm setpoints so that in the event that an out-of-limit mixture is created, the built-in horn will sound and a light on the front panel will illuminate. The horn may be silenced with a push button on the front panel. Because the gas analyzer is built into the gas mixing system the operator is immediately notified of a malfunction in the gas mixing system or in the supply gas system which would create a bad mixture. A 4-20mA output signal is available from the gas analyzer which can be wired to the user's data collection system to serve as a permanent record of the gas mixture analysis.

The gas analyzer provided in the gas mixing system is of the thermal conductivity type manufactured by Thermco since 1951. This thermal conductivity detector is ideal for this application since it is useful for detecting binary gas mixtures. The gas analyzer requires a minimum amount of maintenance, and does not contain any chemicals or sensors that must be periodically changed. Calibration with a high quality standard gas mixture is recommended once per year.

THE THERMCO SURGE TANK SYSTEM

The Model 8530 uses a 5 gallon surge tank which is located inside the enclosure. The Thermco surge tank system has the significant advantage of maintaining the accuracy of the gas mixture from 0 to full rated flow rate. Gas mixing systems without a surge tank will have a minimum flow rate below which the gas mixture becomes inaccurate.



ORDERING INFORMATION

Thermco gas mixers are available through many local industrial gas suppliers. Thermco gas mixers may also be ordered directly from the factory. It is specially important to order the correct pressure conditions for the application. If there are questions, please contact Thermco at sales@thermco.com.