



Infrared Gas Analyzers

Specifications and requirements for the Gasboard 3100 rack mounted and Gasboard 3100P portable gas analyzers



3100P Portable



3100 Rack Mounted

The Wuhan Cubic Optics Gasboard 3100 (rack mounted) and 3100P (portable) infrared gas analyzers are systems for determining the composition of the gaseous products of gasification. This package comes with the following:

- Gas conditioner (charcoal filter and multi-stage, water-based gas scrubber)
- Power cable with transformer
- Gas tubing
- Nylon carrying case (portable only)

Required supporting materials

Like other gas analysis equipment, calibration gases are required for accurate measurement. For the best results, the calibration gas should be within 10% of the concentration of the components analyzed in the gas sample. Calibration gases can be done as a mixture in a single tank in any combination or can be diluted to the correct concentration with nitrogen. A source of pure nitrogen and hydrogen will also be needed to complete calibration.

See the back side of this sheet for specification tables.

Recommended Calibration Gas Concentrations for Wood Gas¹

Component	Concentration
Methane (CH ₄)	5.00%
Carbon Monoxide (CO)	20.00%
Propane (C ₂ H ₆)	3.00%
Carbon Dioxide (CO ₂)	15.00%
Hydrogen (H ₂)	20.00%

Pure gases for calibration

Component	Concentration
Nitrogen (N ₂)	100%
Hydrogen (H ₂)	100%

These gases are not included with the gas analyzer, and must be sourced by the buyer. Please contact your local supplier for calibration gas availability and pricing.

Specifications

Components	Analytic method	Range	Resolution	Precision
CO ₂	NDIR	20%	0.01%	≤2%
CO	NDIR	30%	0.01%	≤2%
H ₂	TCD	30%	0.01%	≤2%
O ₂	ECD	5%	0.01%	≤2%
CH ₄	NDIR	10%	0.01%	≤2%
C _n H _m	NDIR	10%	0.01%	≤2%

Note: Measurement range can be customized. Max: 6 components simultaneously.

Response Time (TD+T90)	<10 sec (NDIR)
Response Time	15 min
Operating temperature	0 - 50°C
Relative humidity	5 - 85%
Ambient air pressure	86 - 108 kPa
Power supply AC	220V/120V, 50/60 Hz (Please specify power requirement when ordering)
Weight	3.5kg

¹ *use nitrogen for the balance gas if needed