

MAX-Bev™ Gen 2

CO₂ PURITY MONITORING SYSTEM



KEY BENEFITS

- Fully integrated system that provides sensitive, accurate measurements of impurities
- Simultaneous measurement of over 20 impurities down to ppb levels, as required by ISBT & EIGA standards
- Applications include beverage production, CO₂ stream monitoring, and CCUS
- Automated CO₂ purity monitoring to 100.00±0.02%
- Use of QA/QC qualification gas is fully user defined
- Report templates are modifiable by customers for individualized needs

KEY FEATURES

- 10 channel multiplexer
- Zirconium oxide oxygen analyzer
- SQLite historical database
- DTGS FTIR detector with spectral range of 600-5,000cm⁻¹
 - Allows for measurement of all IR active impurities and CO₂ purity
 - Eliminates the need for wet methods
- Oxidizer module which converts all reduced sulfur species to SO₂
 - Allows for measurement of total reduced sulfur impurity level

RECOMMENDED ACCESSORIES



Atlas Truck Station



Flashbox-1



Flashbox-2



CDA
(Clean Dry Air Generator)



Calibration Gases
(ABCP, N₂, CO₂, O₂)



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MAX-Bev CO₂ Purity Monitoring System Specifications

Multiplexer

Number of sample channels	10
Sample flow	7 L/min
Total analysis time	10 minutes

Gas Requirements

Zero gas	Nitrogen, N3.0 or better, 80 psig
Clean dry air	Clean dry air, filtered and free of H ₂ O and hydrocarbons, 80 psig
CO ₂ reference gas	Research grade (99.9999%) CO ₂ , 80 psig
Impurities reference gas	Blend of 5 ppm COS, 10 ppm benzene and 75 ppm propane in N ₂ balance, 80-85 psig
O ₂ reference gas (optional)	50 ppm O ₂ in N ₂ balance, 20-30 psig

Facilities Requirements

Environmental temperature range	20-30°C
Environmental relative humidity (RH)	10-90% RH, non-condensing
Power	208-240 VAC, 50/60 Hz, 20 A circuit (4 A typical, 16 A max.)
Dimensions (W x H x D)	651 x 1952 x 944 mm
Estimated weight	180 kg

Factory Integration

Data outputs	Modbus TCP/IP
	Relay outputs (Form C)
	Analog outputs (4-20 mA)
	Digital outputs (24 V sourcing)
Data inputs	Modbus TCP/IP remote control
	Analog inputs (4-20 mA)
	Digital inputs (24 V) for remote start and stop
	Thermocouple inputs (Type K)

MAX-Bev CO₂ Purity Monitoring System Analytical Specifications

Compound	Calibration Range	Detection Limit
Acetaldehyde	ND-400 ppm	5 ppb
Acetone	ND-1000 ppm	20 ppb
Ammonia	ND-400 ppm	10 ppb
Benzene (total aromatic hydrocarbon)	ND-5 ppm	5 ppb
Carbon dioxide	90-100%	Matrix
Carbon monoxide	ND-55 ppm	120 ppb
Ethane	ND-500 ppm	20 ppb
Ethanol	ND-1000 ppm	20 ppb
Ethylene	ND-100 ppm	20 ppb
Methane	ND-65 ppm	5 ppb
Methanol	ND-750 ppm	10 ppb
Moisture	ND-100 ppm	1 ppm
Nitric oxide	ND-100 ppm	75 ppb
Nitrogen dioxide	ND-30 ppm	25 ppb
Oxygen	ND-500 ppm	1 ppm
Pentane	ND-500 ppm	100 ppb
Propane	ND-400 ppm	100 ppb
Total hydrocarbon	ND-1000 ppm	100 ppb
Total non-methane hydrocarbon	ND-1000 ppm	100 ppb
Total sulfur (SO ₂)	ND-20 ppm	10 ppb



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