

FIELD PROVEN: CMAS SYSTEM REDUCES GLOBAL WARMING POTENTIAL BY 85+%	"PLUG-AND-PLAY" ASSEMBLY, DESIGNED FOR OUTDOOR INSTALLATION	CAN OPERATE INDEFINITELY WITHOUT ON-SITE ELECTRICAL
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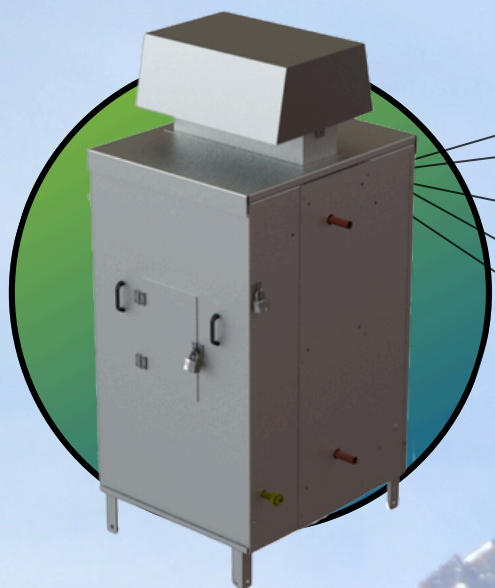
CMAS.



CATALYTIC METHANE ABATEMENT SYSTEM



Product Details



- The CMAS is available in sizes: S, M, L, & XL
- Capacity can be increased by “piggy backing” double and 4 pack configurations
- Utilizing components that are CSA approved for Class I Division II
- Housing is provided as a complete “Plug-and-Play”
- P.Eng stamped as “intrinsically safe” for positioning on wellsite

CMAS - SMALL UNIT

- Galvanized Weatherization Housing
- Mounting Legs
- 1 Class 1, Division 1, CSA Approved Catalytic Heaters, to process up to 3.4 M3/Day
- Suitable for Dry, “Sweet” Methane Gas
- ½” NPT Gas Connection Point
- Inlet Over-Pressure Regulator for relief over 34 kPa (5 PSI)
- Minimum Inlet Gas Operating Pressure, 1.5 kPa (6” WC)
- Heater startup power requirement of 250 Watts per heater, for approx. 15 minutes (weather dependent), with manual push-button start required, then 5 minutes of power overlap before disconnecting the power supply.
- 8M Heater Startup Power Cord, one for each heater, with:
 - Jumper Clamps for 12 Volt DC Heater (15 Amps)
 - 5-15P Plug for 120 Volt Heaters
 - 6-15P Plug for 240 volt heaters
- Access Door on each side for access to the gas start pushbutton
- Major components CSA approved
- Nominally 3:1 Turndown (site specific based on fuel composition and BTU content)
- Inlet regulators and/or water filter/separator by others, as required
- Installation by others

CMAS - MEDIUM UNIT

- Galvanized Weatherization Housing
- Mounting Legs
- 1 Class 1, Division 1, CSA Approved Catalytic Heaters, to process up to 10.2 M3/Day
- Suitable for Dry, “Sweet” Methane Gas
- ½” NPT Gas Connection Point
- Inlet Over-Pressure Regulator for relief over 34 kPa (5 PSI)
- Minimum Inlet Gas Operating Pressure, 1.5 kPa (6” WC)
- Installation by others
- Heater startup power requirement of 500 Watts per heater, for approx. 15 minutes (weather dependent), with manual push-button start required, then 5 minutes of power overlap before disconnecting the power supply.
- 8M Heater Startup Power Cord, one for each heater, with:
 - Jumper Clamps for 12 Volt DC Heater (30 Amps)
 - 5-15P Plug for 120 Volt Heaters
 - 6-15P Plug for 240 volt heaters
- Access Door on each side for access to the gas start pushbutton
- Major components CSA approved
- Nominally 3:1 Turndown (site specific based on fuel composition and BTU content)
- Inlet regulators and/or water filter/separator by others, as required

CMAS - LARGE UNIT

- Galvanized Weatherization Housing
- Mounting Legs
- 1 Class 1, Division 1, CSA Approved Catalytic Heater, to process up to 25.5 M3/Day
- Suitable for Dry, "Sweet" Methane Gas
- ½" NPT Gas Connection Point
- Inlet Over-Pressure Regulator for relief over 34 kPa (5 PSI)
- Minimum Inlet Gas Operating Pressure, 1.5 kPa (6" WC)
- Heater startup power requirement of 2500 Watts per heater, for approx. 15 minutes (weather dependent), with manual push-button start required, then 5 minutes of power overlap before disconnecting the power supply.
- 8M Heater Startup Power Cord, one for each heater, with:
 - 5-30P Plug for 120 Volt Heaters
 - 6-20P Plug for 240 volt heaters
- Access Door on each side for access to the gas start pushbutton
- Major components CSA approved
- Nominally 3:1 Turndown (site specific based on fuel composition and BTU content)
- Inlet regulators and/or water filter/separator by others, as required
- Installation by others

CMAS - XL UNIT

- Galvanized Weatherization Housing
- Mounting Legs
- 2x Class 1, Division 1, CSA Approved Catalytic Heaters, to process up to 50 M3/Day
- Suitable for Dry, "Sweet" Methane Gas
- ½" NPT Gas Connection Point
- Inlet Over-Pressure Regulator for relief over 34 kPa (5 PSI)
- Minimum Inlet Gas Operating Pressure, 1.5 kPa (6" WC)
- Heater startup power requirement of 1600 Watts per heater, for approx. 15 minutes (weather dependent), with manual push-button start required, then 5 minutes of power overlap before disconnecting the power supply.
- 8M Heater Startup Power Cord, one for each heater, with:
 - 5-20P Plug for 120 Volt Heaters
 - 6-15P Plug for 240 volt heaters
- Access Door on each side for access to the gas start pushbutton
- Major components CSA approved
- Nominally 3:1 Turndown (site specific based on fuel composition and BTU content)
- Inlet regulators and/or water filter/separator by others, as required
- Installation by others
- Optional Heat Exchanger to capture exhaust's thermal energy



85+% reduction
in Green House Gas emissions

C.M.A.S. SPECS

Model Number	CMAS-1S	CMAS-2S	CMAS-4S
Heaters	6x24, Class 1 Div 1 Rated	6x24, Class 1 Div 1 Rated	6x24, Class 1 Div 1 Rated
Qty Heaters	1	2	4
Max Output	5 CFH 3.4 m3/Day	10 CFH 6.8 m3/Day	20 CFH 13.6 m3/Day
Min Output	2 CFH 1.4 m3/Day	4 BTU/Hr. 2.8 m3/Day	8 CFH 5.6 m3/Day
Fuel Type	Natural Gas	Natural Gas	Natural Gas
Min Gas Pressure	7" WC 17 mbar	7" WC 17 mbar	7" WC 17 mbar
Max Gas Pressure	14" WC 35 mbar	14" WC 35 mbar	14" WC 35 mbar
Startup Voltage	12VDC, 120/240VAC - 1Ph - 60 Hz	12VDC, 120/240VAC - 1Ph - 60 Hz	12VDC, 120/240VAC - 1Ph - 60 Hz
Startup Wattage	240 W	240 W per heater	240 W per heater
Startup Type	Manual BASO Valve	Manual BASO Valve	Manual BASO Valve
Startup Temp Minimum	-20F -30C	-20F -30C	-20F -30C
Installation	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.

Model Number	CMAS-1M	CMAS-2M	CMAS-4M
Heaters	18x24, Class 1 Div 1 Rated	18x24, Class 1 Div 1 Rated	18x24, Class 1 Div 1 Rated
Qty Heaters	1	2	4
Max Output	15 CFH 10.2 m3/Day	30 CFH 20.4 m3/Day	60 CFH 40.8 m3/Day
Min Output	6 CFH 4.1 m3/Day	12 CFH 8.2 m3/Day	24 CFH 16.3 m3/Day
Fuel Type	Natural Gas	Natural Gas	Natural Gas
Min Gas Pressure	7" WC 17 mbar	7" WC 17 mbar	7" WC 17 mbar
Max Gas Pressure	14" WC 35 mbar	14" WC 35 mbar	14" WC 35 mbar
Startup Voltage	12VDC, 120/480VAC - 1Ph - 60 Hz	12VDC, 120/480VAC - 1Ph - 60 Hz	120/240/480VAC - 1Ph - 60 Hz
Startup Wattage	500 W	500 W per heater	500 W per heater
Startup Type	Manual BASO Valve	Manual BASO Valve	Manual BASO Valve
Startup Temp Minimum	-20F -30C	-20F -30C	-20F -30C
Installation	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.

Model Number	CMAS-1L	CMAS-2L	CMAS-XL
Heaters	18x60, Class 1 Div 1 Rated	18x60, Class 1 Div 1 Rated	24x48, Class 1 Div 1 Rated
Qty Heaters	1	2	2
Max Output	37 CFH 25.5 m3/Day	75 CFH 51.0 m3/Day	75 CFH 51.0 m3/Day
Min BTU's	15 CFH 10.2 m3/Day	30 CFH 20.4 m3/Day	30 CFH 20.4 m3/Day
Fuel Type	Natural Gas	Natural Gas	Natural Gas
Min Gas Pressure	7" WC 17 mbar	7" WC 17 mbar	7" WC 17 mbar
Max Gas Pressure	14" WC 35 mbar	14" WC 35 mbar	14" WC 35 mbar
Startup Voltage	120/240/480VAC - 1Ph - 60 Hz	120/240/480VAC - 1Ph - 60 Hz	120/240/480VAC - 1Ph - 60 Hz
Startup Wattage	2500 W	2500 W per heater	2500 W per heater
Startup Type	Manual BASO Valve	Manual BASO Valve	Manual BASO Valve
Startup Temp Minimum	-20F -30C	-20F -30C	-20F -30C
Installation	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.	To be installed above snow line & reduce as much wind as possible.



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