



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 200887-2500001929

Project: 2500001929

Date Issued: October 18, 1999

Issued to: **Alternate Energy Systems, Inc.**
210 Prospect Park, P.O. Box 2469
Peachtree City, Georgia 30269
USA
Attention: Mr. William S. Horne

The products listed below are eligible to bear the Marks shown, with the indicator "C" and "US" adjacent to the CSA Mark.



Issued by: E. Cotic, CET

Signature: _____

PRODUCTS

CLASS 1502-03 BOILERS(GAS) - Miscellaneous

CLASS 1502-83 BOILERS(GAS) - Miscellaneous - CERTIFIED TO US STANDARDS

LP-Gas Vaporizers -Direct Fired Vaporizer. Models AE-(80,120), DF-(1600,2400,3600,4800*). Model No. designates rated capacity in gal/hr at 0F(-18C) inlet temperature.

- Horizontal Water Bath Vaporizer with Venturi Burner. Models WB-(200,250**,350). Model No. rated capacity in gal/hr at 0F(-18C) inlet temperature. Requires 115V, 60Hz, 1Ph. power.

- Horizontal Water Bath Vaporizer with Power Burner. Models WB-(450,550,650,750,850,1000,1200,1500,1800,2000,2200,2500,3000,3500,4500,5500). Model No. designates rated capacity in gal/hr at 0F(-18C) inlet temperature. Requires 230V, 60Hz, 1Ph. power for models thru WB-1000. All others use 460V, 60Hz, 3Ph. power.

* DF models similar to AE models previously Approved as discussed in FMRC Approval Report S/N 26918, dated July 25, 1977 and JI 0F3H5.AF, dated March 23, 1981.

**WB-250 identical to models WB-200, WB-350 except for capacity.

LP-Gas Vaporizer-Mixers -Direct Fired Vaporizer/Venturi Mixer Module. Models AE-(80/HVS-7MM, 120/HVS-10MM, 160/HVS-14MM, 240/HVS-20MM, 360/HVS-30MM), DF-(1600/HVS-14MM, 2400/HVS-20MM, 3600/HVS-30MM, 4800/HVS-40MM*). Standard output pressure is 5psi (35kPa) at 1465 Btu/cu.ft.(55J L). Vaporizer Model No. designates rated discharge in millions

The "C" and "US" indicator adjacent to the CSA Mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada. This includes products eligible to bear the NRTL indicator. NRTL, i.e. Nationally Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.



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of Btu/hr. Requires 115V, 60Hz, 1Ph. power. For output pressures from 10 to 50 psi(70 to 345 kPa) at 1465 Btu/cu.ft.(55J/L), the model designation is followed by suffix H and requires compressed air for venturi operation.

- Horizontal Water Bath Vaporizer with Venturi Burner/Venturi Mixer Module. Models WB-(200/HVS-14MM, 250/HVS-20MM, 350/HVS-30MM). Standard output pressure is 5psi (35kPa) at 1465 Btu/cu.ft.(55J/L), the model designation is followed by suffix H.

- Horizontal Water Bath Vaporizer with Power Burner/Venturi Mixer Module. Models WB-(450/HVS-40MM, 550/HVS-50MM, 750/HVS-60MM, 850/HVS-70MM, 1000/HVS-80MM, 1000/HVS-90MM, 1200/HVS-100MM), WB-1500/HVS-(110MM, 120MM, 130MM), WB-1800/HVS-(140MM,150MM,160MM). Standard output pressure is 5psi(35kPa) at 1465 Btu/cu.ft.(55J/L). Model No. designates rated vaporizer capacity in gal/hr and mixed gas capacity in millions of Btu/hr, respectively. For output pressures from 10 to 50 psi(70 to 345 kPa) at 1465 Btu/cu.ft.(55J/L), the model designation is followed by suffix H and requires compressed air for venturi operation. Requires 230V, 60Hz, 1Ph. power.

* DF models similar to AE models previously Approved as discussed in FMRC Approval Reports S/N 26919, dated July 20, 1977 and (JI) 0F3H5.AF, dated March 23, 1981.

LP-GAS Venturi Mixers-Proportioners - Mixer. Models HVS-(7MM,10MM,14MM,20MM,30MM,50MM,80MM,90MM, 100MM,110MM,120MM,130MM,140MM,150MM,160MM*). Standard output pressure is 5psi(35kPa) at 1465 Btu/cu.ft.(55J/L). Model No. designates rated capacity in millions of Btu/hr. Requires 115V, 60Hz, 1Ph. power.

- Mixer. Models HVS-(7MMH,10MMH,14MMH,20MMH,30MMH,50MMH, 80MMH,90MMH,100MMH,110MMH,120MMH,130MMH,140MMH,150MMH, 160MMH*). Output pressures from 10 to 50 psi(70 to 365 kPa) at 1465 Btu/cu.ft. (55J/L). Model No. designates rated capacity in millions of Btu/hr. Units require compressed air supply and 115V, 60Hz, 1Ph. power.

- Blender. Models POM-(30,40,60,80,100*). Output pressures from 10 to 100 psi (70 to 680 kPa) available. Model No. designates outlet size in inches. Units require compressed air supply. Requires 115V, 60Hz, 1Ph. power supply.

* Models similar to those previously Approved as discussed in FMRC Approval Report JI 0F3H5.AF, dated March 23, 1981.

APPLICABLE REQUIREMENTS

FMRC Approval Standard, "Liquefied Petroleum Gas Vaporizers, Gas-Air Mixers and Vaporizer Mixers", Class Numbers 7151, 7156, and 7157, dated January 1990.

Factory Mutual Approved Standard for Electrical Utilization Equipment, Class Number 3820

MARKINGS

As indicated in Report



CSA INTERNATIONAL

Standards
Development

QMI
Management Systems Registration

Certification
and Testing

REPORT: 200887-2500001929

DESCRIPTIVE AND TEST REPORT

PROJECT: 2500001929

Edition 1: October 18, 1999; Project 2500001929 - Etobicoke
Issued by E. Cotic, CET;

Contents: Certificate of Compliance - Pages 1
Supplement to Certificate of Compliance - Page 1
Description and Tests - Pages 1 to 2
Illustrations - Ills 001-009

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Horizontal Water Bath Vaporizer with Venturi Burner. Models WB-(200,250,350)

Horizontal Water Bath Vaporizer with Power Burner. Models WB-(450,550,650,750,850,
1000,1200,1500,1800,2000,2200,2500,3000,3500,4500,5500)

LP-GAS Vaporizer-Mixer - Direct Fired Vaporizer/Venturi Mixer Module. Models AE-(80/HVS-7MM,
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DF-(1600/HVS-14MM, 2400/HVS-20MM, 3600/HVS-30MM, 4800/HVS-40MM)

Horizontal Water Bath Vaporizer with Venturi Burner/Venturi Mixer Module.
Models WB-(200/HVS-14MM, 250/HVS-20MM, 350/HVS-30MM).

Horizontal Water Bath Vaporizer with Power Burner/Venturi Mixer Module.
Models WB-(450/HVS-40MM, 550/HVS-50MM, 750/HVS-60MM, 850/HVS-70MM,
1000/HVS-80MM, 1000/HVS-90MM, 1200/HVS-100MM), WB-1500/HVS-(110MM,
120MM,130MM), WB-1800/HVS-(140MM,150MM,160MM).

LP-GAS Venturi Mixers-Proportioners - Mixer. Models HVS-(7MM,10MM,14MM,20MM,30MM,50MM,80MM,
90MM,100MM,110MM,120MM,130MM,140MM,150MM,160MM).

Mixer. Models HVS-(7MMH,10MMH,14MMH,20MMH,30MMH,
50MMH,80MMH,90MMH,100MMH,110MMH,120MMH,130MMH,
140MMH,150MMH,160MMH).

Blender. Models POM-(30, 40, 60, 80, 100).

We Answer With Solutions



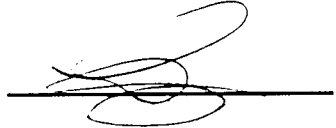
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Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

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Signature: 

Product Certification History

Project	Date	Description
2500001929	October 18, 1999	Original Certification.